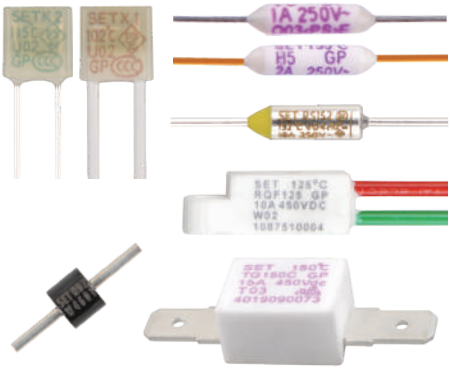
SET safe | SET fuse

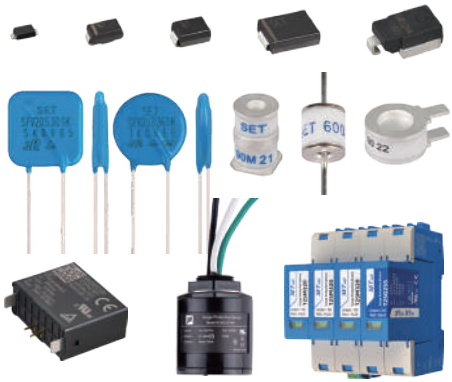
www.SETsafe.com
www.SETfuse.com

Providing a Total Solution for High Standard Safety Circuit Protection

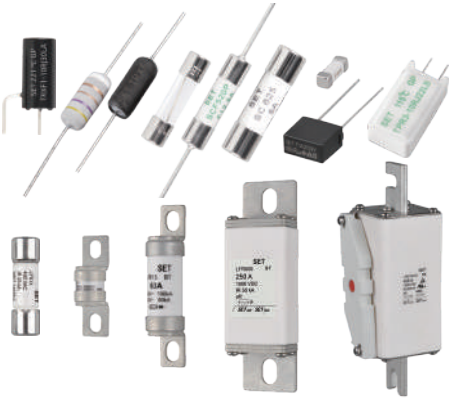
Over Temperature Protection



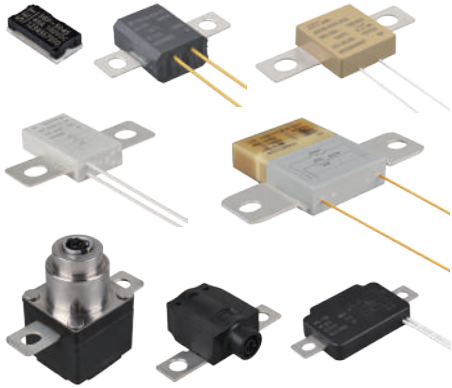
Over Voltage Protection



Over Current Protection



Active Protection



2024

What
can do for you

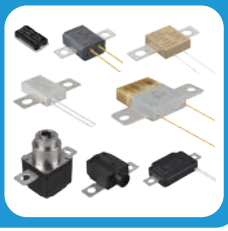
www.SETsafe.com www.SETfuse.com

MISSION

PROVIDING A TOTAL SOLUTION FOR HIGH STANDARD SAFETY CIRCUIT PROTECTION.

PROVIDE 4 CATEGORIES OF PROTECTION COMPONENT PRODUCTS IN 2024

https://setsafe.com/products.html

Over Temperature Protection	Over Voltage Protection	Over Current Protection	Active Protection
			

SETsafe | SETfuse was established in 2000 in Xiamen, China. We have a presence in more than 40 countries and regions recognising our products. Some of the world's 500 fortune companies are our valuable customers. We have pioneered, innovated & developed several products exclusively. Products are compliance with CCC, UL, cUL, VDE, TUV, PSE, KC, IATF 16949, ISO 9001, ISO 14001, ISO 45001, ISO 50001, GB/T29490 certificates. We are in one of the core participating teams for revising and setting several national & international standards in the field of Circuit Protection.

SETsafe | SETfuse Key Markets: New Energy, Energy Storage, Telecom, Surge Protector, Power, Lighting, Home Appliances, Mobile Devices, Medical, etc.

SETsafe | SETfuse

PV System in SETsafe | SETfuse Industrial Park

SETsafe | SETfuse Benefits

20+

Over 20 years of DESIGNING, MANUFACTURING AND SELLING of circuit protection components

40+

Sold to more than 40 countries and regions

Automatic

Automatic process production

500

A brand chosen by fortune 500 companies

Test Center

Safety, Accuracy, Equity, Efficiency

https://setsafe.com/Testing-Center-Laboratory/Introduction.html

1000+

More than 1000 testing items

300+

More than 300 sets of specialized testing equipment

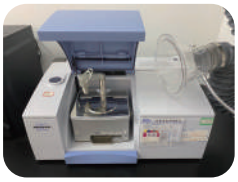
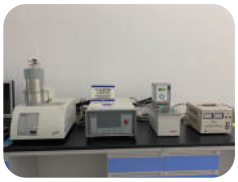
Standards

Has the testing capabilities of IEC international standards, ITU standards, EN European standards, UL standards, and national and industry standards

WTDP

The laboratory has obtained the qualification of UL under Witnessed Test Data Program(WTDP) and the accreditation qualification by TUV Rheinland

Some Test Equipment


The testing focus of the laboratory covers material analysis class, temperature test class, environmental test class, electrical test class, lightning current test class, with more than 1000 testing items.

The laboratory has the testing capabilities of IEC international standards, EN European standards, UL standards, and national and industry standards.

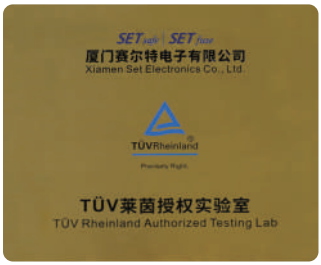
Test items include Marking test, Tensile test, Thrust test, Creepage distances and clearances, Dielectric strength, Insulation resistance, Holding temperature, Functioning temperature, Maximum temperature limit, Ageing, Varistor voltage, Leakage current, Voltage proof.....

WTDP

https://setsafe.com/Testing-Center-Laboratory/Witnessed-Test-Data-Program-WTDP.html

SETsafe | SETfuse Obtained Permanent Authorization:

- UL 60691,CSA C22.2 NO.60691:19.
- UL 1449, EDITION 5, ISSUE DATE 01/08/2021 (Surge Protective Devices).
- UL 1434, EDTION 1, REVISION DATE 05/18/2020 (THERMISTOR-TYPE DEVICES).
- CSA Component Acceptance Service, T.I.L, Class No.9073-31, ISSUE DATE 07/09/1991.
- CSA C22.2 No.269.5, EDITION 2, ISSUE, DATE 09/2017 (Surge Protective Devices – Type 5 - Components).
- CSA C22.2 No.269.4, EDITION 2, ISSUE, DATE 03/2017 (Surge Protective Devices – Type 4 - Component Assemblies).



SETsafe | SETfuse Obtained Permanent Authorization:

- IEC 60127
- IEC 60539-1:2016
- IEC 60691:2015+A1
- EN 60691:2016+A1
- IEC 61051-1:2018
- EN IEC 61051-1:2018
- IEC 61051-2:1991+A1
- IEC 61051-2-2:1991
- IEC 62368-1:2020 Annex G.8
- EN IEC 62368-1:2020 Annex G.8
- EN 50539-11:2013+A1
- IEC 61643-11:2011
- EN 61643-11:2012+A11
- IEC 61643-21:2012
- EN 61643-21:2001+A1+A2
- IEC 61643-31:2018
- EN 61643-31:2018
- IEC61643-311

Contents

Contents

Over Temperature Protection

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection.html

SETsafe | SETfuse Products

1. Thermal-Link (ATCO)-Alloy Type
2. Direct Current Thermal-Link (DC-ATCO)-Alloy Type
3. Thermal-Link (OTCO)-Organic Type
4. Thermal Turn On (TTO)-Organic Type

Glossary

T_f	Rated Functioning Temp.
I_r	Rated Current
U_r	Rated Voltage

Abnormal Temperature of Electrical Equipment

Abnormal temperature caused by fault or abnormal operation in electrical equipment or circuit.

Applications

Communication, Home Appliances, Electronic Components on PCB board, Electric Vehicle, Industrial Control and Automation, Automobile, Lighting

SETsafe | SETfuse Solution

Normally, Fusible Alloy is jointed to the two lead wires. Under abnormal conditions, when the temperature reaches to the fusing temperature of Alloy Thermal Cutoff (ATCO), the Fusible Alloy melts and quickly retracts to the two lead wire ends with the aid of the Flux Resin and disconnects the circuit completely. Using ATCO to solve the problem of abnormal temperature caused by fault or abnormal working in electrical equipment or circuit, in order to avoid fire.

1

Thermal-Link (ATCO) Alloy Type

T_f : 76 ~ 230 °C

I_r : 1 ~ 200 A

U_r : 125 ~ 800 VAC, 50 ~ 200 VDC

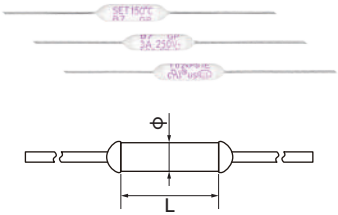
More than 500 models

RoHS
REACH

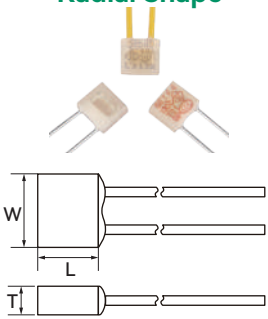
Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type.html

Shape

1 Axial Shape



2 Radial Shape



Thermal-Link (ATCO)
Alloy Type

1 Axial Shape

Learn more

V series

T_f : 76 ~ 221 ℃
I_r : 1 A / 125 VAC, 1 A / 250 VAC, 4 A / 60 VDC
U_r : 125 / 250 VAC, 50 / 60 VDC
Body Dimensions: L=6.5 mm, ϕ=2.1 mm
Applications: Motor / Transformer / Lighting / Home Appliances / Switching Power Supply / Diffuser / Electric Blanket

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/V-series.html

Learn more

H series

T_f : 76 ~ 221 ℃
I_r : 2 A
U_r : 125 / 250 VAC, 50 / 60 VDC
Body Dimensions: L=9.0 mm, ϕ=2.5 mm
Applications: Motor / Transformer / Lighting / Home Appliances / Switching Power Supply / Diffuser / Electric Blanket

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/H-series.html

Learn more

B series

T_f : 76 ~ 221 ℃
I_r : 3 A
U_r : 125 / 250 VAC, 50 / 60 VDC
Body Dimensions: L=10.0 mm, ϕ=3.0 mm
Applications: Motor / Transformer / Lighting / Home Appliances / Switching Power Supply / Diffuser /Electric Blanket

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/B-series.html

Learn more

SF series

T_f : 115 ~ 139 ℃
I_r : 3 / 5 A
U_r : 60 VDC
Body Dimensions: L=6.0 mm, ϕ=1.5 mm
Applications: Motor / Transformer / Lighting / Home Appliances / Switching Power Supply / Diffuser / Electric Blanke

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/SF-series.html

Learn more

C series

T_f : 76 ~ 221 ℃
I_r : 5 A / (125 / 250 VAC), (5 / 7 A) / 50 VDC (5 / 6 / 8 A) / 60 VDC
U_r : 125 / 250 VAC, 50 / 60 VDC
Body Dimensions: L=11.5 mm, ϕ=3.3 mm
Applications: Motor / Transformer / Lighting / Power Strips / Switching Power Supply /Home Appliances / Batter

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/C-series.html

Learn more

M series

T_f : 139 ℃
I_r : 9 A
U_r : 60 VDC
Body Dimensions: L=6.5 mm, ϕ=2.1 mm
Applications: Motor / Lighting / Power Strips / Home Appliances / Batter

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/M-series.html

1 Axial Shape

Learn more

U series

T_f : 76 ~ 221 ℃
I_r : 10 A
U_r : 250 VAC, 60 VDC
Body Dimensions: L=14.0 mm, ϕ=4.0 mm
Applications: Motor / Transformer / Lighting / Power Strips / Switching Power Supply / Home Appliances / Battery / Capacitor

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/U-series.html

Learn more

R series

T_f : 76 ~ 221 ℃
I_r : 15 A
U_r : 250 VAC, 60 VDC
Body Dimensions: L=14.0 mm, ϕ=4.0 mm
Applications: Motor / Transformer / Lighting / Home Appliances / Switching Power Supply / Power Strips / Battery / Capacitor

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/R-series.html

Learn more

CR series

T_f : 139 ℃
I_r : 15 A
U_r : 60 VDC
Body Dimensions: L=11.5 mm, ϕ=3.3 mm
Applications: Motor / Lighting / Power Strips / Home Appliances / Battery

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/CR-series.html

Learn more

HS series

T_f : 125 ~ 145 ℃
I_r : 5 A
U_r : 500 VAC, 200 VDC
Body Dimensions: L=9.6 mm, W=6.0 mm, T=6.0 mm
Applications: Lighting / Surge Protection Device / Battery / Automotive Electronics

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/HS-series.html

Learn more

HP series

T_f : 125 ~ 145 ℃
I_r : 10 A
U_r : 500 VAC, 200 VDC
Body Dimensions: L=8.6 mm, W=7.6 mm, T=6.0 mm
Applications: Lighting / Surge Protection Device / Battery / Automotive Electronics

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/HP-series.html

Learn more

HN series

T_f : 125 ~ 145 ℃
I_r : 15 A
U_r : 690 VAC, 200 VDC
Body Dimensions: L=10.0 mm, W=10.0 mm, T=7.4 mm
Applications: Lighting / Surge Protection Device / Battery / Automotive Electronics

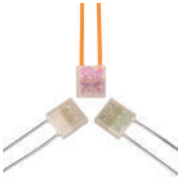
Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/HN-series.html

Learn more

F series

T_f : 76 ~ 160 ℃
I_r : 1 A / 250 VAC, 3 A / 60 VDC
U_r : 250 VAC, 60 VDC
Body Dimensions: L=4.2 mm, W=5.1 mm, T=2.3 mm
Applications: Motor / Transformer / Lighting / Home Appliances / Switching Power Supply / Diffuser / Electric Blanket / Electric Heating Apparatus

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/F-series.html

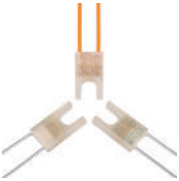


Learn more

K series

T_f : 76 ~ 221 ℃
I_r : 2 A / 250 VAC, 4 A / 60 VDC
U_r : 250 VAC, 60 VDC
Body Dimensions: L=5.8 mm, W=5.8 mm, T=2.3 mm
Applications: Motor / Transformer / Lighting / Battery / Home Appliances / Switching Power Supply / Diffuser / Electric Blanket / Electric Heating Apparatus

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/K-series.html



Learn more

KG series

T_f : 76 ~ 221 ℃
I_r : 2 A
U_r : 250 VAC, 60 VDC
Body Dimensions: L=10.0 mm, W=5.8 mm, T=2.3 mm
Applications: Lighting / Switching Power Supply / Home Appliances / Batter

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/KG-series.html

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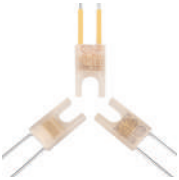
X series

T_f : 76 ~ 221 ℃
I_r : 3 A / 250 VAC, 4 A / 60 VDC
U_r : 250 VAC, 60 VDC
Body Dimensions: L=5.8 mm, W=5.8 mm, T=2.3 mm
Applications: Motor / Transformer / Lighting / Diffuser / Switching Power Supply / Home Appliances / Electric Blanket / Battery / Electric Heating Apparatus

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/X-series.html



Learn more

XG series

T_f : 76 ~ 221 ℃
I_r : 3 A
U_r : 250 VAC, 60 VDC
Body Dimensions: L=10.0 mm, L1=10.0 mm, W=5.8 mm, T=2.3 mm
Applications: Lighting / Switching Power Supply / Home Appliances / Battery

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/XG-series.html

Learn more

KM series

T_f : 125 ~ 150 ℃
I_r : 2 A
U_r : 300 / 320 VAC
Body Dimensions: L=5.8 mm, W=5.8 mm, T=2.3 mm
Applications: Motor / Transformer / Lighting / Switching Power Supply / Battery / Home Appliances

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/KM-series.html

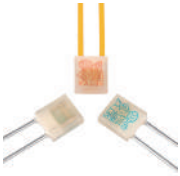
2 Radial Shape

Learn more

XM series

T_f : 130 ~ 150 ℃
I_r : 3 A
U_r : 300 / 320 VAC
Body Dimensions: L=5.8 mm, W=5.8 mm, T=2.3 mm
Applications: Motor / Transformer / Lighting / Battery / Switching Power Supply / Home Appliances

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/XM-series.html



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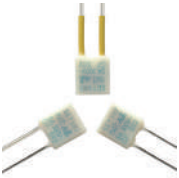
Y series

T_f : 76 ~ 187 ℃
I_r : 5 A
U_r : 250 / 300 VAC
Body Dimensions: L=7.0 mm, W=6.6 mm, T=2.7 mm
Applications: Motor / Lighting / Power Strips /Battery / Switching Power Supply / Home Appliances

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/Y-series.html



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YM series

T_f : 130 ~ 150 ℃
I_r : 5 A
U_r : 300 VAC
Body Dimensions: L=7.0 mm, W=6.6 mm, T=2.7 mm
Applications: Motor / Lighting / Power Strips / Battery / Switching Power Supply / Home Appliances

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/YM-series.html

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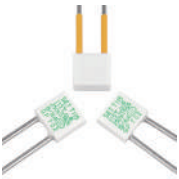
S series

T_f : 102 ~ 150 ℃
I_r : 10 A
U_r : 125 / 250 VAC
Body Dimensions: L=7.5 mm, W=8.3 mm, T=3.4 mm
Applications: Motor / Lighting / Power Strips / Battery / Switching Power Supply / Surge Protection Device / Home Appliances

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/S-series.html



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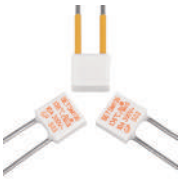
T series

T_f : 102 ~ 221 ℃
I_r : 15 / 16 A
U_r : 125 / 250 VAC
Body Dimensions: L=7.5 mm, W=8.3 mm, T=3.4 mm
Applications: Motor / Lighting / Power Strips / Battery / Home Appliances / Surge Protection Device / Switching Power Supply

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/T-series.html



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SM series

T_f : 102 ~ 150 ℃
I_r : 10 A
U_r : 300 VAC
Body Dimensions: L=7.5 mm, W=8.3 mm, T=3.4 mm
Applications: Motor / Lighting / Power Strips / Battery / Home Appliances /Surge Protection Device / Switching Power Supply

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/SM-series.html

2
Radial Shape

Learn more

TM series

T_f : 102 ~ 150 ℃
I_r : 15 / 16 A
U_r : 300 VAC
Body Dimensions: L=7.5 mm, W=8.3 mm, T=3.4 mm
Applications: Motor / Lighting / Power Strips / Battery / Home Appliances / Surge Protection Device / Switching Power Supply
Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/TM-series.html

Learn more

P series

T_f : 102 ~ 221 ℃
I_r : 20 A
U_r : 250 / 300 / 400 VAC, 120 VDC
Body Dimensions: L=11.5 mm, W=10.8 mm, T=4.8 mm
Applications: Motor / Power Strips / Battery / Surge Protection Device / Home Appliances / Switching Power Supply
Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/P-series.html

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Q series

T_f : 102 ~ 136 ℃
I_r : 25 A
U_r : 250 /300 /400 VAC, 120 VDC
Body Dimensions: L=11.5 mm, W=10.8 mm, T=4.8 mm
Applications: Motor / Switching Power Supply / Power Strips/Battery / Home Appliances / Surge Protection Device / Capacitor / Transformer
Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/Q-series.html

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SK series

T_f : 102 ~ 221 ℃
I_r : 10 A
U_r : 250 VAC
Body Dimensions: L=17.0 mm, W=11.0 mm, T=6.0 mm, ϕ=5.5 mm
Applications: Home Appliances / Electric Heating Apparatus
Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/SK-series.html

Learn more

SKL series

T_f : 200 ~ 230 ℃
I_r : 10 A
U_r : 250 VAC
Body Dimensions: L=23.0 mm, W=12.0 mm, T=5.3 mm, ϕ=5.0 mm
Applications: Home Appliances / Electric Heating Apparatus
Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/SKL-series.html

Learn more

TK series

T_f : 102 ~ 221 ℃
I_r : 15 / 16 A
U_r : 250 VAC
Body Dimensions: L=17.0 mm, W=11.0 mm, T=6.0 mm, ϕ=5.5 mm
Applications: Home Appliances / Electric Heating Apparatus
Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/TK-series.html

Learn more

SY series

T_f : 95 ~ 230 ℃
I_r : 10 A
U_r : 250 VAC
Body Dimensions: L=13.0 mm, ϕ=9.0 mm
Applications: Home Appliances /
Electric Heating Apparatus

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/SY-series.html

Learn more

TY series

T_f : 95 ~ 145 ℃
I_r : 15 / 16 A
U_r : 250 VAC
Body Dimensions: L=13.0 mm, ϕ=9.0 mm
Applications: Home Appliances /
Electric Heating Apparatus

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/TY-series.html

Learn more

SD series

T_f : 102 ~ 150 ℃
I_r : 10 A
U_r : 125 VDC
Body Dimensions: L=7.5 mm, W=8.6 mm, T=3.6 mm
Applications: Switching Power Supply / Battery /
Surge Protection Device

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/SD-series.html

Learn more

TD series

T_f : 102 ~ 150 ℃
I_r : 15 / 16 A
U_r : 125 VDC
Body Dimensions: L=7.5 mm, W=8.6 mm, T=3.6 mm
Applications: Switching Power Supply / Battery /
Surge Protection Device

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/TD-series.html

Learn more

PD series

T_f : 102 ~ 150 ℃
I_r : 20 A
U_r : 125 VDC
Body Dimensions: L=11.8 mm, W=10.7 mm, T=4.8 mm
Applications: Switching Power Supply / Battery /
Surge Protection Device

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/PD-series.html

Learn more

QD series

T_f : 102 ~ 150 ℃
I_r : 25 A
U_r : 125 VDC
Body Dimensions: L=11.8 mm, W=10.7 mm, T=4.8 mm
Applications: Switching Power Supply / Battery /
Surge Protection Device

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/QD-series.html

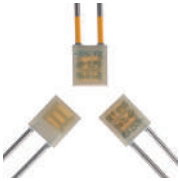
2 Radial Shape

Learn more

N series

T_f : 102 ~ 150 ℃
I_r : 30 A
U_r : 250 VAC
Body Dimensions: L=13.0 mm, W=11.5 mm, T=4.9 mm
Applications: Switching Power Supply / Power Strips / Battery / Surge Protection Device / Home Appliances

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/N-series.html



Learn more

G series

T_f : 102 ~ 150 ℃
I_r : 40 A
U_r : 250 VAC
Body Dimensions: L=15.5 mm, W=13.8 mm, T=5.7 mm
Applications: Switching Power Supply / Power Strips / Battery / Surge Protection Device / Home Appliances

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-ATCO-Alloy-Type/G-series.html

Abnormal Temperature of Electrical Equipment

Abnormal temperature caused by fault or abnormal operation in electrical equipment or circuit.

Applications

Communication, Automobile, Household Appliances, Components on PCB, Electric Vehicle, Industrial Control and Automation, Lighting, Energy Storage, Photovoltaic

SETsafe | SETfuse Solution

Under normal working conditions, the alloy is connected between the two leads. When the DC-ATCO feels abnormal heat and reaches to the predetermined Functioning Temp., the alloy melts and quickly retracts to both ends of the lead under the action of the flux, thus disconnect the circuit.

2

Direct Current Thermal-Link (DC-ATCO) Alloy Type

T_f : 76 ~ 230 °C

I_r : 10 ~ 200 A

U_r : 60 ~ 850 VDC

CB RoHS REACH

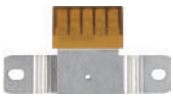
Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type.html

Rated Current (Ir)

1	2	3	4	5	6
≤ 10 A	11 ~ 15 A	16 ~ 25 A	26 ~ 60 A	61 ~ 80 A	81 ~ 200 A





Direct Current Thermal-Link (DC-ATCO) Alloy Type

1 Rated Current (Ir): ≤ 10 A

Learn more

RQF series

T_f : 86 ~ 187 ℃
I_r : 10 A
U_r : 450 VDC
I_{min} : 3 A

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/RQF-series.html

Learn more

RPF series

T_f : 86 ~ 102 ℃
I_r : 10 A
U_r : 400 VDC
I_{min} : 0.5 A

Learn more:
https://www.setsafe.cn/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/RPF-series.html

Learn more

HP series

T_f : 125 ~ 145 ℃
I_r : 10 A
U_r : 200 VDC, 500 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/HP-series.html

Learn more

HS series

T_f : 125 ~ 145 ℃
I_r : 5 A
U_r : 200 VDC, 500 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/HS-series.html

Learn more

SD series

T_f : 102 ~ 150 ℃
I_r : 10 A
U_r : 125 VDC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/SD-series.html

Learn more

U series

T_f : 76 ~ 221 ℃
I_r : 10 A
U_r : 60 VDC, 250 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/U-series.html

Direct Current Thermal-Link (DC-ATCO) Alloy Type

1 Rated Current (Ir): ≤ 10 A

Learn more

C series

T_f : 76 ~ 221 ℃
I_r : (5 / 7 A) / 50 VDC, (5 / 6 / 8 A) / 60 VDC
5 A / (125 / 250 VAC)
U_r : 50 / 60 VDC, 125 / 250 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/C-series.html

Learn more

M series

T_f : 139 ℃
I_r : 9 A
U_r : 60 VDC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/M-series.html

Learn more

SF series

T_f : 115 ~ 139 ℃
I_r : 3 / 5 A
U_r : 60 VDC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/SF-series.html

Learn more

X series

T_f : 76 ~ 221 ℃
I_r : 3 A / 250 VAC, 4 A / 60 VDC
U_r : 60 VDC, 250 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/X-series.html

Learn more

K series

T_f : 76 ~ 221 ℃
I_r : 2 A / 250 VAC, 4 A / 60 VDC
U_r : 60 VDC, 250 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/K-series.html

Learn more

V series

T_f : 76 ~ 221 ℃
I_r : 4 A / 60 VDC, 1 A / 125 VAC,
1 A / 250 VAC
U_r : 50 / 60 VDC, 125 / 250 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/V-series.html

Direct Current Thermal-Link (DC-ATCO) Alloy Type

1 Rated Current (Ir): ≤ 10 A

Learn more

B series

T_f : 76 ~ 221 ℃
I_r : 3 A
U_r : 50 / 60 VDC, 125 / 250 VAC

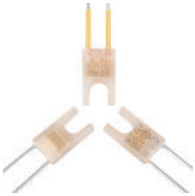
Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/B-series.html

Learn more

F series

T_f : 76 ~ 160 ℃
I_r : 1 A / 250 VAC, 3 A / 60 VDC
U_r : 60 VDC, 250 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/F-series.html



Learn more

XG series

T_f : 76 ~ 221 ℃
I_r : 3 A
U_r : 60 VDC, 250 VAC

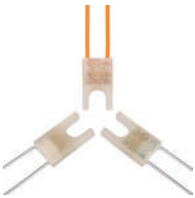
Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/XG-series.html

Learn more

H series

T_f : 76 ~ 221 ℃
I_r : 2 A
U_r : 50 / 60 VDC, 125 / 250 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/H-series.html



Learn more

KG series

T_f : 76 ~ 221 ℃
I_r : 2 A
U_r : 60 VDC, 250 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/KG-series.html

Direct Current Thermal-Link (DC-ATCO) Alloy Type

2 Rated Current (Ir): 11 ~ 15 A

Learn more

TGH series

T_f : 102 ~ 187 ℃
I_r : 15 A
U_r : 850 VDC
I_{min} : 3 A

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/TGH-series.html

Learn more

RVH series

T_f : 102 ~ 187 ℃
I_r : 15 A
U_r : 600 VDC
I_{min} : 0.5 A

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/RVH-series.html

Learn more

RPK series

T_f : 102 ~ 150 ℃
I_r : 15 A
U_r : 500 VDC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/RPK-series.html

Learn more

TGxxxC series

T_f : 86 ~ 150 ℃
I_r : 15 / 20 A
U_r : 400 / 450 VDC, 600 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/TGxxxC-series.html

Learn more

ALP series

T_f : 102 ~ 125 ℃
I_r : 15 / 60 A
U_r : 180 / 200 VDC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/ALP-series.html

Learn more

HN series

T_f : 125 ~ 145 ℃
I_r : 15 A
U_r : 200 VDC, 690 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/HN-series.html

Direct Current Thermal-Link (DC-ATCO) Alloy Type

2 Rated Current (Ir): 11 ~ 15 A

Learn more

TD series

T_f : 102 ~ 150 ℃
I_r : 15 / 16 A
U_r : 125 VDC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/TD-series.html

Learn more

R series

T_f : 76 ~ 221 ℃
I_r : 15 A
U_r : 60 VDC, 250 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/R-series.html

Learn more

CR series

T_f : 139 ℃
I_r : 15 A
U_r : 60 VDC

Learn more:
https://www.setsafe.cn/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/CR-series.html

Direct Current Thermal-Link (DC-ATCO) Alloy Type

3 Rated Current (Ir): 16 ~ 25 A

Learn more

RSKxxxA series

T_f : 102 ~ 187 ℃
I_r : 25 A
U_r : 600 VDC
I_{min} : 3 A

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/RSKxxxA-series.html

Learn more

TGxxxC series

T_f : 86 ~ 150 ℃
I_r : 15 / 20 A
U_r : 400 / 450 VDC, 600 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/TGxxxC-series.html

Direct Current Thermal-Link (DC-ATCO) Alloy Type

3 Rated Current (Ir): 16 ~ 25 A

Learn more

QD series

T_f : 102 ~ 150 ℃
I_r : 25 A
U_r : 125 VDC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/QD-series.html

Learn more

PD series

T_f : 102 ~ 150 ℃
I_r : 20 A
U_r : 125 VDC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/PD-series.html

Learn more

TD series

T_f : 102 ~ 150 ℃
I_r : 15 / 16 A
U_r : 125 VDC

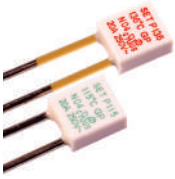
Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/TD-series.html

Learn more

Q series

T_f : 102 ~ 136 ℃
I_r : 25 A
U_r : 120 VDC, 250 /300 /400 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/Q-series.html



Learn more

P series

T_f : 102 ~ 221 ℃
I_r : 20 A
U_r : 120 VDC, 250 / 300 / 400 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/P-series.html

Learn more

SLx series

T_f : 102 ~ 136 ℃
I_r : 25 / 30 / 40 / 50 / 60 / 80 A
U_r : 100 VDC, 125 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/SLx-series.html

Direct Current Thermal-Link (DC-ATCO) Alloy Type

4

Rated Current (Ir): 26 ~ 60 A

Learn more

ASLxxxA series

T_f : 102 ~ 187 ℃
I_r : 30 A
U_r : 600 VDC
I_{min} : 0.5 A

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/ASLxxxA-series.html

Learn more

ARL series

T_f : 86 ~ 187 ℃
I_r : 30 A
U_r : 500 VDC

Learn more:
https://www.setsafe.cn/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/ARL-series.html

Learn more

ALP series

T_f : 102 ~ 125 ℃
I_r : 15 / 60 A
U_r : 180 / 200 VDC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/ALP-series.html

Learn more

SLx series

T_f : 102 ~ 136 ℃
I_r : 25 / 30 / 40 / 50 / 60 / 80 A
U_r : 100 VDC, 125 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/SLx-series.html

Learn more

ADNxxxB series

T_f : 205 ~ 230 ℃
I_r : 50 / 55 / 80 A
U_r : 48 VDC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/ADNxxxB-series.html

Learn more

TVB series

T_f : 102 ~ 136 ℃
I_r : 50 A
U_r : 60 VDC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/TVB-series.html

Direct Current Thermal-Link (DC-ATCO) Alloy Type

5

Rated Current (Ir): 61 ~ 80 A

Learn more

TS series

T_f : 102 ~ 136 ℃
I_r : 80 / 100 A
U_r : 100 VDC, 125 / 250 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/TS-series.html

Learn more

SLx series

T_f : 102 ~ 136 ℃
I_r : 25 / 30 / 40 / 50 / 60 / 80 A
U_r : 100 VDC, 125 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/SLx-series.html

Learn more

ADNxxxB series

T_f : 205 ~ 230 ℃
I_r : 50 / 55 / 80 A
U_r : 48 VDC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/ADNxxxB-series.html

Direct Current Thermal-Link (DC-ATCO) Alloy Type

6

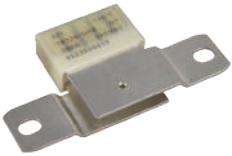
Rated Current (Ir): 81 ~ 200 A

Learn more

TS series

T_f : 102 ~ 136 ℃
I_r : 80 / 100 A
U_r : 100 VDC, 125 / 250 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/TS-series.html



Learn more

TB series

T_f : 102 ~ 136 ℃
I_r : 200 A
U_r : 100 VDC, 125 VAC

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Direct-Current-Thermal-Link-DC-ATCO-Alloy-Type/TB-series.html

Abnormal Temperature of Electrical Equipment

Abnormal temperature caused by fault or abnormal operation in electrical equipment or circuit.

Applications

Kitchen Appliances, Sanitary Appliances, Health Care Appliances, Major Home Appliances, Office Equipment, Vehicle Parts

SETsafe | SETfuse Solution

Under normal operating temp., the solid thermal pellet keeps the isolated lead connected to the sliding contact. When the Thermal-Link senses abnormal heat and temp. reaches the predeter mined fusing temp., thermal pellet melts and the sliding contact separates from the isolated lead with the assistance of trip spring, thereby the circuit is disconnected.

3

Thermal-Link (OTCO) Organic Type

I_r : 10 A, 15 / 16 A

U_r: 250 VAC

T_f : 72 ~ 263 °C

RoHS
REACH

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-OTCO-Organic-Type.html

Rated Current (I_r)

1
10 A

2
15 / 16 A

Thermal-Link (OTCO)
Organic Type

1
Rated Current (Ir): 10 A

RS series

I_r : 10 A

U_r : 250 VAC

T_f : 72 ~ 263 ℃

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-OTCO-Organic-Type/RS-series.html

Thermal-Link (OTCO)
Organic Type

2
Rated Current (Ir): 15 / 16 A

RT series

I_r : 15 / 16 A

U_r : 250 VAC

T_f : 72 ~ 263 ℃

Learn more:
https://setsafe.com/Products/Over-Temperature-Protection/Thermal-Link-OTCO-Organic-Type/RT-series.html

Abnormal Temperature of Electrical Equipment

Abnormal temperature caused by fault or abnormal operation in electrical equipment or circuit.

Applications

Fire-fighting Equipment, Remote Signaling Switch

SETsafe | SETfuse Solution

Normally, the solid thermal pellet keeps the isolated lead and disc separating. When the thermal pellet sensed abnormal heat and temp. reaches the predetermined temp., thermal pellet melts and the isolated lead and disc contact, with the assistance of spring, thereby the circuit is connected.

4

Thermal Turn On (TTO) Organic Type

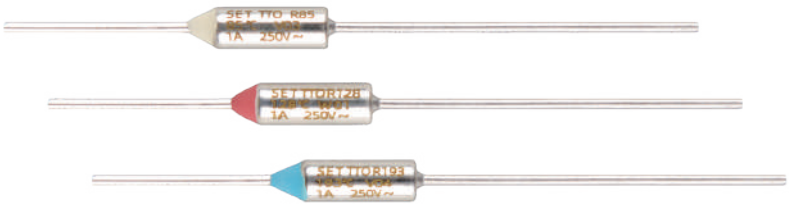
T_f : 73 ~ 217 °C

I_r : 1 A

U_r : 250 VAC

RoHS REACH

Learn more:
https://www.setsafe.cn/Products/Over-Temperature-Protection/Thermal-Turn-On-TTO-Organic-Type.html



Over Voltage Protection

Learn more

https://www.setsafe.cn/Products/Over-Voltage-Protection.html

SETsafe | SETfuse Products

Over Voltage Protection

Learn more

https://www.setsafe.cn/Products/Over-Voltage-Protection.html

SETsafe | SETfuse Products

Glossary

V_R	Reverse Stand-Off Voltage
P_{PPM}	Rated Random Recurring Peak Impulse Power Dissipation
I_{PP}	Peak Pulse Current
V_{BR}	Breakdown Voltage
U_c	Max. Continuous Operating Voltage
I_n	Nominal Discharge Current ---TTVS, TTVS, MOV, TFMOV, TFV, SPD-M, SPD
I_n	Impulse Discharge Current---GDT
V_{RWM}	Reverse Standoff Voltage
C_J	Capacitance
V_{DRM}	Peak off-state Voltage
V_S	D.C. Spark-Over Voltage
I_{imp}	Impulse Discharge Current
I_{fi}	Follow Current
V_{ac}	Max. Continuous a.c. Voltage
I_{max}	Max. Peak Current---MOV, TFV
UCT	Upper Category Temp.
U_{oc}	Open-circuit Voltage
I_{max}	Max. Discharge Current---TFMOV, SPD-M, SPD
U_{cpv}	Max. Continuous Operating Voltage for PV application

Suppress Transient Overvoltage Generated by Surge Event

Protect electronic circuits against transients and overvoltage threats such as those induced by lightning strikes, inductive load switching, EFT (electrically fast transients) and electro-static discharge (ESD) associated with transmission on data lines and electronic circuits.

Applications

Communication Equipment, Security & Protection, Industrial Control Equipment, Power Supply, Automotive Electronics, New Energy, Lightning Protection

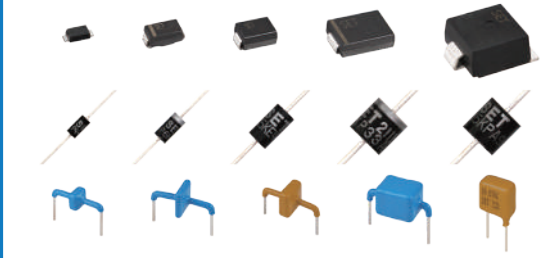
SETsafe | SETfuse Solution

TVS Diodes are used to protect sensitive circuit from high-voltage transients. Their p-n junctions have a larger cross-sectional area than those of a normal diode, allowing them to conduct large currents to ground without damage.

Transient Voltage Suppression Diodes (TVS Diodes)

Two performance levels

Standard Type



Automotive Grade

1.1 TVS Diodes Standard Type

RoHS REACH

Learn more
https://setsafe.com/Product/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS.html

Package Type

1	2	3	4	5
DO-214AA	DO-214AB	DO-214AC	SOD-123FL	SMTO-218
				
6	**7**	**8**	**9**	**10**
DO-201	DO-41	DO-15	P600	Radial Lead
				

TVS Diodes Standard Type

1 Package Type: DO-214AA

Learn more

SACB series

V_R : 5 ~ 50 V

P_{PPM} (10 / 1000 μs): 500 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SACB-series.html

Learn more

SMBJ series

V_R : 5.0 ~ 440 V

P_{PPM} (10 / 1000 μs): 600 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SMBJ-series.html

Learn more

P6SMB series

V_R : 5.8 ~ 512 V

P_{PPM} (10 / 1000 μs): 600 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/P6SMB-series.html

TVS Diodes Standard Type

2 Package Type: DO-214AB

Learn more

SMCJ series

V_R : 5 ~ 440 V

P_{PPM} (10 / 1000 μs): 1500 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SMCJ-series.html

Learn more

1.5SMC series

V_R : 5.8 ~ 512 V

P_{PPM} (10 / 1000 μs): 1500 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/1.5SMC-series.html

Learn more

3.0SMCJ series

V_R : 5 ~ 440 V

P_{PPM} (10 / 1000 μs): 3000 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/3.0SMCJ-series.html

Learn more

SMDJ series

V_R : 5 ~ 440 V

P_{PPM} (10 / 1000 μs): 3000 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SMDJ-series.html

Learn more

5.0SMDJ series

V_R : 12 ~ 170 V

P_{PPM} (10 / 1000 μs): 5000 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/5.0SMDJ-series.html

TVS Diodes Standard Type

3 Package Type: DO-214AC

Learn more

SMAJ series

V_R : 5 ~ 440 V

P_{PPM} (10 / 1000 μs): 400 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SMAJ-series.html

Learn more

P4SMA series

V_R : 5.8 ~ 468 V

P_{PPM} (10 / 1000 μs): 400 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/P4SMA-series.html

TVS Diodes Standard Type

3 Package Type: DO-214AC

SMA6J series

V_R : 5 ~ 250 V

P_{PPM} (10 / 1000 μs): 600 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SMA6J-series.html

TVS Diodes Standard Type

4 Package Type: SOD-123FL

Learn more

SMF series

V_R : 5.0 ~ 250 V

P_{PPM} (10 / 1000 μs): 200 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SMF-series.html

Learn more

P4SMF series

V_R : 5.0 ~ 85 V

P_{PPM} (10 / 1000 μs): 400 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/P4SMF-series.html

TVS Diodes Standard Type

5 Package Type: SMTO-218

Learn more

SPC1 series

V_R : 380 / 430 V

I_{PP} (8 / 20 μs): 1 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SPC1-series.html

Learn more

SPC3 series

V_R : 66 V

I_{PP} (8 / 20 μs): 3 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SPC3-series.html

TVS Diodes Standard Type

5 Package Type: SMTO-218

Learn more

SPC6 series

V_R : 58 ~ 76 V

I_{PP} (8 / 20 μs): 6 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SPC6-series.html

Learn more

SPC10 series

V_R : 58 ~ 86 V

I_{PP} (8 / 20 μs): 10 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SPC10-series.html

TVS Diodes Standard Type

6 Package Type: DO-201

Learn more

1.5KE series

V_R : 5.8 ~ 512 V

P_{PPM} (10 / 1000 μs): 1500 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/1.5KE-series.html

Learn more

LCE series

V_R : 6.5 ~ 90 V

P_{PPM} (10 / 1000 μs): 1500 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/LCE-series.html

TVS Diodes Standard Type

7 Package Type: DO-41

Learn more

P4KE series

V_R : 5.8 ~ 468 V

P_{PPM} (10 / 1000 μs): 400 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/P4KE-series.html

TVS Diodes Standard Type

8 Package Type: DO-15

Learn more

P6KE series

V_R : 5.8 ~ 512 V

P_{PPM} (10 / 1000 μs): 600 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/P6KE-series.html

Learn more

SAC series

V_R : 5 ~ 50 V

P_{PPM} (10 / 1000 μs): 500 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SAC-series.html

TVS Diodes Standard Type

9 Package Type: P600

Learn more

5KP series

V_R : 5.0 ~ 250 V

P_{PPM} (10 / 1000 μs): 5000 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/5KP-series.html

Learn more

15KPA series

V_R : 17 ~ 280 V

P_{PPM} (10 / 1000 μs): 15000 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/15KPA-series.html

Learn more

20KPA series

V_R : 20 ~ 300 V

P_{PPM} (10 / 1000 μs): 20000 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/20KPA-series.html

Learn more

30KPA series

V_R : 28 ~ 360 V

P_{PPM} (10 / 1000 μs): 30000 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/30KPA-series.html

Learn more

SPCL1 series

V_R : 66 ~ 430 V
I_{PP} (8 / 20 μs): 1 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SPCL1-series.html

Learn more

SPCL3 series

V_R : 15 ~ 430 V
I_{PP} (8 / 20 μs): 3 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SPCL3-series.html

Learn more

SPCL6 series

V_R : 15 ~ 430 V
I_{PP} (8 / 20 μs): 6 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SPCL6-series.html

Learn more

SPCL10 series

V_R : 15 ~ 530 V
I_{PP} (8 / 20 μs): 10 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SPCL10-series.html

Learn more

SPCL15 series

V_R : 15 ~ 380 V
I_{PP} (8 / 20 μs): 15 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SPCL15-series.html

Learn more

SPCL20 series

V_R : 16 ~ 76 V
I_{PP} (8 / 20 μs): 20 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Standard-Type/SPCL20-series.html

1.2

TVS Diodes Automotive Grade

V_R : 5.0 ~ 553 V

P_{PPM} (10/1000 μs): 400 ~ 8000 W

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Automotive-Grade.html

Package Type

1	2	3	4
DO-214AA	DO-214AB	DO-214AC	DO-218AB
			

TVS Diodes Automotive Grade

1 Package Type: DO-214AA

Learn more

ASMB series

V_R : 5.8 ~ 553 V

P_{PPM} (10/1000 μs): 600 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Automotive-Grade/ASMB-series.html

Learn more

ASMB-VR series

V_R : 5.0 ~ 440 V

P_{PPM} (10/1000 μs): 600 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Automotive-Grade/ASMB-VR-series.html

TVS Diodes Automotive Grade

2 Package Type: DO-214AB

Learn more

ASMC series

V_R : 5.8 ~ 512 V

P_{PPM} (10/1000 μs): 1500 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Automotive-Grade/ASMC-series.html

Learn more

ASMC-VR series

V_R : 5.0 ~ 440 V

P_{PPM} (10/1000 μs): 1500 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Automotive-Grade/ASMC-VR-series.html

Learn more

ASMD series

V_R : 5.0 ~ 440 V

P_{PPM} (10/1000 μs): 3000 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Automotive-Grade/ASMD-series.html

Learn more

A5.0SMD series

V_R : 12 ~ 440 V

P_{PPM} (10/1000 μs): 5000 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Automotive-Grade/A5.0SMD-series.html

TVS Diodes Automotive Grade

3 Package Type: DO-214AC

Learn more

ASMA series

V_R : 5.8 ~ 468 V

P_{PPM} (10/1000 μs): 400 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Diodes-Automotive-Grade/ASMA-series.html

Learn more

ASMA-VR series

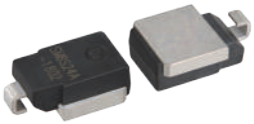
V_R : 5.0 ~ 440 V

P_{PPM} (10/1000 μs): 400 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Automotive-Grade/ASMA-VR-series.html

TVS Diodes Automotive Grade

4 Package Type: DO-218AB



Learn more

SM8SxxA series

V_R : 10 ~ 43 V

P_{PPM} (10/1000 μs): 6600 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Automotive-Grade/SM8SxxA-series.html

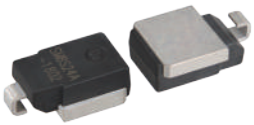
Learn more

SM8SxxCA series

V_R : 12 ~ 43 V

P_{PPM} (10/1000 μs): 6600 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Automotive-Grade/SM8SxxCA-series.html



Learn more

SM8TxxA series

V_R : 20 ~ 43 V

P_{PPM} (10/1000 μs): 8000 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Automotive-Grade/SM8TxxA-series.html

Learn more

SM8TxxCA series

V_R : 33 ~ 36 V

P_{PPM} (10/1000 μs): 8000 W

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Transient-Voltage-Suppression-Diodes-TVS/TVS-Automotive-Grade/SM8TxxCA-series.html

Limiting Transient Overvoltage and Discharging Surge Current

Overvoltage protection is also known as surge protection. Overvoltage protection components are used to limit transient overvoltage and discharge surge current.

Applications

Communication Power Supply, New Energy Equipment, Lndustrial Control Equipment, Security, Lightning Protection Products

SETsafe | SETfuse Solution

TTVS not only has the same function as TVS to limit the amplitude of overvoltage and discharge inrush current, but also has the ability to disengage the TVS from the main circuit by the action of thermal protection components in the event of TVS deterioration or TOV (transient overvoltage) damage.

2

Thermal Protected Transient Suppression Diode (TTVS)

V_{BR} @IT10mA: 67 ~ 90 VDC

U_c : 58 ~ 76 VDC

I_n (8 / 20 μs) : 15 ~ 20 kA

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Thermal-Protected-Transient-Suppression-Diode-TTVS.html

TTVS xxK series

V_{BR} @IT10mA : 67 ~ 90 VDC
U_c : 58 ~ 76 VDC
I_n (8/20 μs): 15 ~ 20 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Thermal-Protected-Transient-Suppression-Diode-TTVS/TTVSxxK-series.html

TTVS xxM series

V_{BR} @IT10mA : 67 ~ 90 VDC
U_c : 58 ~ 76 VDC
I_n (8/20 μs): 15 ~ 20 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Thermal-Protected-Transient-Suppression-Diode-TTVS/TTVSxxM-series.html

ESD(Electrostatic Discharge) And EOS(Electrical Overstress) Protection

Absorb the low-energy and high-voltage pulse that occurs on the circuit and avoid the damage of electronic products by electrostatic discharge.

Applications

Consumer Electronics, Communication Equipment, Security & Protection
Automotive Electronics, New Energy

SETsafe | SETfuse Solution

ESD and EOS protection devices can provide both single channel and multiple channels (Diode Array) products with either uni-directional or bi-directional protection. The products are designed by integrated semiconductor technology with super fast response time (nS level), ultra-low capacitance (typical 0.2 pF), very low clamping voltage, wider working voltage (2.5V ~ 36V) and ultra-smaller size (DFN0603 0.6*0.3 mm). They offer an ideal protection solution for I/O interfaces and digital and analog signal lines, in computer and consumer portable electronics markets.

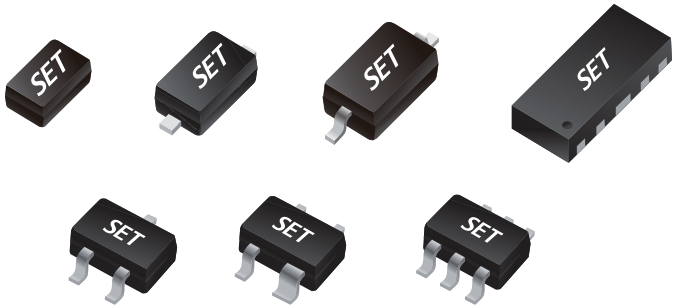
3

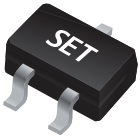
ESD TVS Diode Arrays (ESD TVS)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays.html

V_R : (2.8 ~ 36) V
C_J : min. 0.2pF
Packages: DFN, SOD523 / 323,
SOT23 / 26 / 363 / 563, SOP8

RoHS REACH



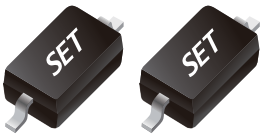


Learn more

GSM24CCAN series

V_{RWM} : 24 V
C_J : 30 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/GSM24CCAN-series.html

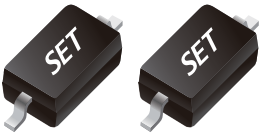


Learn more

SD04A6D32G series

V_{RWM} : 4.5 V
C_J : 500 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD04A6D32G-series.html

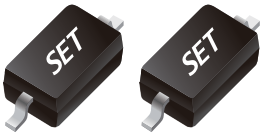


Learn more

SD05A3D32G series

V_{RWM} : 5.0 V
C_J : 450 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD05A3D32G-series.html

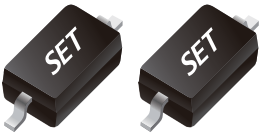


Learn more

SD05A4D32G1 series

V_{RWM} : 5.0 V
C_J : 1050 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD05A4D32G1-series.html

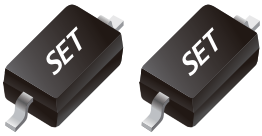


Learn more

SD07A0D32G1 series

V_{RWM} : 7.0 V
C_J : 700 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD07A0D32G1-series.html

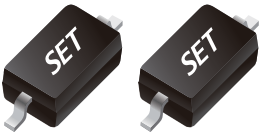


Learn more

SD3V320D32U series

V_{RWM} : 3.3 V
C_J : 1.5 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD3V320D32U-series.html

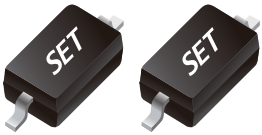


Learn more

SD0310D32U series

V_{RWM} : 3.3 V
C_J : 1.0 pF
Feature: IEC61000-4-2 (ESD) ± 15 kV (air),
± 8 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0310D32U-series.html

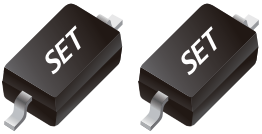


Learn more

SDxxxxD32G series

V_{RWM} : 3.3 ~ 36 V
C_J : 35 ~ 450 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SDxxxxD32G-series.html

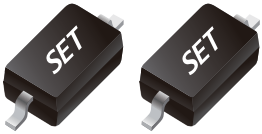


Learn more

SD0525D32L series

V_{RWM} : 5.0 V
C_J : 60 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0525D32L-series.html

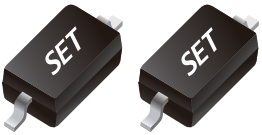


Learn more

SDxxxxD32G1 series

V_{RWM} : 3.3 ~ 36 V
C_J : 60 ~ 450 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://www.setsafe.cn/Product/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SDxxxxD32G1-series.html

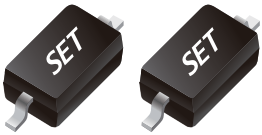


Learn more

SDxxxxD32U series

V_{RWM} : 3.3 ~ 24 V
C_J : 1.0 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SDxxxxD32U-series.html

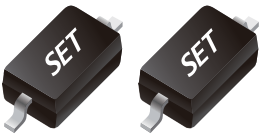


Learn more

SDxxxxD32U1 series

V_{RWM} : 3.0 ~ 24 V
C_J : 1.0 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SDxxxxD32U1-series.html



Learn more

SD04A0D32G1 series

V_{RWM} : 4.5 V
C_J : 850 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD04A0D32G1-series.html

Learn more

SD0304F10U series

V_{RWM} : 3.3 V
C_J : 0.4 pF
Feature: IEC61000-4-2 (ESD) ± 20 kV (air),
± 20 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0304F10U-series.html

Learn more

SD0308F10L series

V_{RWM} : 3.3 V
C_J : 15 pF
Feature: IEC61000-4-2 (ESD) ± 15 kV (air),
± 8 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0308F10L-series.html

Learn more

SD0504F10U series

V_{RWM} : 5.0 V
C_J : 0.4 pF
Feature: IEC61000-4-2 (ESD) ± 20 kV (air),
± 20 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0504F10U-series.html

Learn more

SD0504F10U1 series

V_{RWM} : 5.0 V
C_J : 0.5 pF
Feature: IEC61000-4-2 (ESD) ± 20 kV (air),
± 20 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0504F10U1-series.html

Learn more

SD0705F10L series

V_{RWM} : 7.0 V
C_J : 20 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0705F10L-series.html

Learn more

SD0520F10L series

V_{RWM} : 5.0 V
C_J : 40 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0520F10L-series.html

Learn more

SD1205F10L series

V_{RWM} : 12 V
C_J : 15 pF
Feature: IEC61000-4-2 (ESD) ± 15 kV (air),
± 8 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD1205F10L-series.html

Learn more

SD2403F10L series

V_{RWM} : 24 V
C_J : 17 pF
Feature: IEC61000-4-2 (ESD) ± 15 kV (air),
± 8 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD2403F10L-series.html

Learn more

SDxxxxF10G1 series

V_{RWM} : 3.3 ~ 36 V
C_J : 60 ~ 450 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

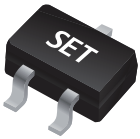
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SDxxxxF10G1-series.html

Learn more

SD0504F06U series

V_{RWM} : 5.5 V
C_J : 0.25 pF
Feature: IEC61000-4-2 (ESD) ± 15 kV (air),
± 8 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0504F06U-series.html

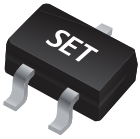


Learn more

SD2403T23L series

V_{RWM} : 24 V
C_J : 17 pF
Feature: IEC61000-4-2 (ESD) ± 15 kV (air),
± 8 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD2403T23L-series.html

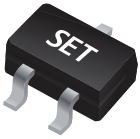


Learn more

SD71217T23G series

V_{RWM} : 12 / 7 V
C_J : 75 pF
Feature: IEC61000-4-2 (ESD) ± 15 kV (air),
± 8 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD71217T23G-series.html

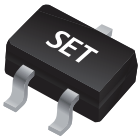


Learn more

SDxxxxT23G series

V_{RWM} : 3.3 ~ 36 V
C_J : 35 ~ 450 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SDxxxxT23G-series.html

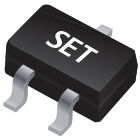


Learn more

SDxxxxT23G1 series

V_{RWM} : 3.3 ~ 36 V
C_J : 60 ~ 300 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SDxxxxT23G1-series.html

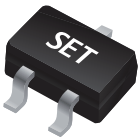


Learn more

SDxxxxT23GL series

V_{RWM} : 5.0 ~ 36 V
C_J : 10 ~ 15 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SDxxxxT23GL-series.html



Learn more

SDxxxxT23GM series

V_{RWM} : 3.3 ~ 5.0 V
C_J : 65 ~ 75 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SDxxxxT23GM-series.html

Learn more

SD0505D52L series

V_{RWM} : 5 V
C_J : 15 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0505D52L-series.html

Learn more

SD0505D52U series

V_{RWM} : 5 V
C_J : 0.4 pF
Feature: IEC61000-4-2 (ESD) ± 25 kV (air),
± 20 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0505D52U-series.html

Learn more

SD0505D52U1 series

V_{RWM} : 5 V
C_J : 0.5 pF
Feature: IEC61000-4-2 (ESD) ± 25 kV (air),
± 20 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0505D52U1-series.html

Learn more

SD0520D52L series

V_{RWM} : 5 V
C_J : 40 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0520D52L-series.html

Learn more

SD2401D52G1 series

V_{RWM} : 24 V
C_J : 50 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://www.setsafe.cn/Product/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD2401D52G1-series.html

Learn more

SD1203D52L series

V_{RWM} : 12 V
C_J : 9.5 pF
Feature: IEC61000-4-2 (ESD) ± 25 kV (air),
± 25 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD1203D52L-series.html

Learn more

SD1208D52L series

V_{RWM} : 12 V
C_J : 10 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

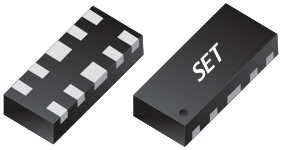
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD1208D52L-series.html

Learn more

SDxxxxD52G1 series

V_{RWM} : 2.5 ~ 15 V
C_J : 28 ~ 145 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SDxxxxD52G1-series.html



Learn more

SD0504F25U1 series

V_{RWM} : 5 V
C_J : 0.5 pF
Feature: IEC61000-4-2 (ESD) ± 25 kV (air),
± 20 kV (contact)

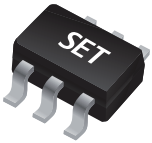
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0504F25U1-series.html

Learn more

SD0505T43U series

V_{RWM} : 5 V
C_J : 1.2 pF
Feature: IEC61000-4-2 (ESD) ± 15 kV (air),
± 8 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0505T43U-series.html

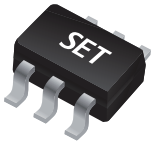


Learn more

SD0508T26U1 series

V_{RWM} : 5 V
C_J : 0.5 pF
Feature: IEC61000-4-2 (ESD) ± 25 kV (air),
± 20 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0508T26U1-series.html



Learn more

SD0520T26L1 series

V_{RWM} : 5 V
C_J : 2 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD0520T26L1-series.html

Learn more

SD1265F16G1 series

V_{RWM} : 12 V
C_J : 510 pF
Feature: IEC61000-4-2 (ESD) ± 30 kV (air),
± 30 kV (contact)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/ESD-TVS-Diode-Arrays/SD1265F16G1-series.html

Suppress Transient Overvoltage And Discharge Surge Current

Absorb the unexpected high energy and high voltage pulse that occurs from the sensitive circuit as to protect the devices damaged by an unexpected surge events during field application.

Applications

Communication Equipment, Security & Protection, Automotive Electronics, New Energy

SETsafe | SETfuse Solution

TSS devices are thyristor devices used to protect sensitive circuits from electrical disturbances caused by lightning-induced surges, inductive-coupled spikes, and AC power fault conditions. The unique structure and characteristics of the thyristor are used to create an overvoltage protection device with precise and repeatable turn-on characteristics with low voltage overshoot and high surge current capabilities.

4

Thyristor Surge Suppressors (TSS)

V_{DRM}: 6 ~ 400 V

C_J: 3 ~ 700 pF

I_{PP} (8/20 μs): 3450 A (Max)

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Thyristor-Surge-Suppressors-TSS.html

Package Type

1 DO-214AA

2 DO-214AB

3 DO-214AC

4 SOD-23-6

Thyristor Surge Suppressors (TSS)

1 Package Type: DO-214AA

Learn more

SPxxxxSB series

V_{DRM} : 6 ~ 400 V
C_J : 25 ~ 50 pF
Surge Rating: 4 kV @ 10/700 μs
I_{PP} (10/1000 μs): 80 A
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Thyristor-Surge-Suppressors-TSS/SPxxxxSB-series.html

Learn more

SPxxxxSC series

V_{DRM} : 6 ~ 440 V
C_J : 35 ~ 60 pF
Surge Rating: 6 kV @ 10/700 μs
I_{PP} (10/1000 μs): 100 A
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Thyristor-Surge-Suppressors-TSS/SPxxxxSC-series.html

Learn more

SPxxxxSD series

V_{DRM} : 6 ~ 400 V
C_J : 40 ~ 150 pF
Surge Rating: 8 kV @ 10/700 μs
I_{PP} (10/1000 μs): 200 A
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Thyristor-Surge-Suppressors-TSS/SPxxxxSD-series.html

Thyristor Surge Suppressors (TSS)

2 Package Type: DO-214AB

Learn more

SP0080SDT series

V_{DRM} : 6 V
C_J : 500 pF
Surge Rating: 6 kV @ 1.2/50 μs
I_{PP} (8/20 μs): 3300 A
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Thyristor-Surge-Suppressors-TSS/SP0080SDT-series.html

Learn more

SP0080SDT-3L series

V_{DRM} : 6 V
C_J : 700 pF
Surge Rating: 6 kV @ 1.2/50 μs
I_{PP} (8/20 μs): 3450 A
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Thyristor-Surge-Suppressors-TSS/SP0080SDT-3L-series.html

Thyristor Surge Suppressors (TSS)

3 Package Type: DO-214AC

Learn more

SP0080TALC series

V_{DRM} : 6 V
C_J : 10 pF
Surge Rating: 2 kV @ 10/700 μs
I_{PP} (10/1000 μs): 35 A

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Thyristor-Surge-Suppressors-TSS/SP0080TALC-series.html

Learn more

SP0080TBLC series

V_{DRM} : 6 V
C_J : 30 pF
Surge Rating: 4 kV @ 10/700 μs
I_{PP} (10/1000 μs): 80 A

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Thyristor-Surge-Suppressors-TSS/SP0080TBLC-series.html

Learn more

SPxxxxSA series

V_{DRM} : 58 ~ 340 V
C_J : 20 ~ 35 pF
Surge Rating: 4 kV @ 10/700 μs
I_{PP} (10/1000 μs): 80 A

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Thyristor-Surge-Suppressors-TSS/SPxxxxSA-series.html

Thyristor Surge Suppressors (TSS)

4 Package Type: SOD-23-6

Learn more

SIP5024G series

V_{DRM} : 24 V
C_J : 3.0 pF
I_{PP} (8/20 μs): 35 A

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Thyristor-Surge-Suppressors-TSS/SIP5024G-series.html

Limiting Transient Overvoltage and Discharging Surge Current

Overvoltage protection is also known as surge protection. Overvoltage protection components are used to limit transient overvoltage and discharge surge current.

Applications

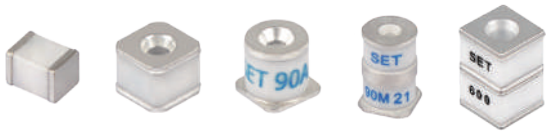
Communication, Power Supply, Security, New Energy, Railway, Charging Pile, Consumer Electronics, LED Power Supply, Data Port, Medical, etc

SETsafe | SETfuse Solution

When the protected circuit or equipment is impacted by the surge, in order to protect the equipment or human from the transient overvoltage, the gas discharge tube will change from the high impedance state to the low impedance state and release the surge energy to reduce the circuit residual voltage.

Gas Discharge Tube (GDT)

SMD Type



DIP Type

High Surge Type

5.1

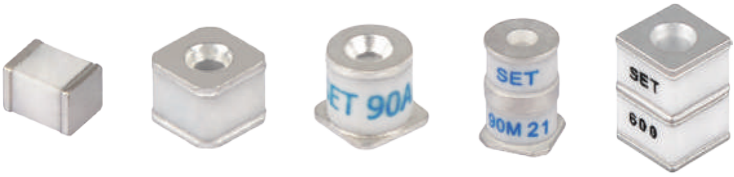
Gas Discharge Tube (GDT) SMD Type

V_s: 70 ~ 1000 V

I_n (8/20 μs): 0.5 / 1 / 2 / 3 / 5 / 10 / 20 kA

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/SMD-Type.html



Learn more

SZ series

V_s : 90 ~ 400 V
I_n (8/20 μs): 0.5 kA
Dimensions: L3.2 × W1.6 × H1.6 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/SMD-Type/SZ-series.html

Learn more

SW series

V_s : 75 ~ 800 V
I_n (8/20 μs): 1 kA
Dimensions: L3. 2 × W2.5 × H2.5 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/SMD-Type/SW-series.html

Learn more

SX series

V_s : 75 ~ 800 V
I_n (8/20 μs): 1 kA / 2 kA
Dimensions: L4.5 × W3.2 × H2.7 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/SMD-Type/SX-series.html

Learn more

SY series

V_s : 75 ~ 800 V
I_n (8/20 μs): 3 kA
Dimensions: L4.0 × W3.5 × H3.5 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/SMD-Type/SY-series.html

Learn more

SN series

V_s : 70 ~ 800 V
I_n (8/20 μs): 5 kA
Dimensions: L4.2 × W5.0 × H5.0 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/SMD-Type/SN-series.html

Learn more

SU series

V_s : 90 ~ 800 V
I_n (8/20 μs): 5 kA / 10 kA
Dimensions: L5.0 × W5.4 × H5.4 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/SMD-Type/SU-series.html

Learn more

SS series

V_s : 70 ~ 800 V
I_n (8/20 μs): 5 kA
Dimensions: L4.2 × W6.2 × H6.2 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/SMD-Type/SS-series.html

Learn more

SD (-SMD) series

V_s : 70 ~ 800 V
I_n (8/20 μs): 5 kA
Dimensions: Φ5.0 × 5.0 mm

Learn more:
https://setsafe.com/Product/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/SMD-Type/SD(-SMD)-series.html

Learn more

SM series

V_s : 70 ~ 800 V
I_n (8/20 μs): 20 kA
Dimensions: Φ9.3 × 6.0 mm

Learn more:
https://setsafe.com/Product/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/SMD-Type/SM-series.html

Learn more

SK series

V_s : 90 ~ 1000 V
I_n (8/20 μs): 10 kA / 20 kA
Dimensions: Φ8.0 × 2.2 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/SMD-Type/SK-series.html

Learn more

SC series

V_s : 70 ~ 800 V
I_n (8/20 μs): 20 kA
Dimensions: L6.0 × W8.3 × H8.3 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/SMD-Type/SC-series.html

Learn more

TS series

V_s : 90 ~ 600 V
I_n (8/20 μs): 3 kA
Dimensions: L6.8 × W3.5 × H3.5 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/SMD-Type/TS-series.html

Learn more

TZ (-SMD) series

V_s : 75 ~ 600 V
I_n (8/20 μs): 5 kA / 10 kA
Dimensions: L7.6 × W5.0 × H5.0 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/SMD-Type/TZ(-SMD)-series.html

Learn more

TY series

V_s : 230 ~ 600 V
I_n (8/20 μs): 5 kA
Dimensions: L7.8 × W5.0 × H5.0 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/SMD-Type/TY-series.html

Learn more

TR (-SMD) series

V_s : 90 ~ 600 V
I_n (8/20 μs): 10 kA / 20 kA
Dimensions: L10.0 × W8.3 × H8.3 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/SMD-Type/TR(-SMD)-series.html

5.2

Gas Discharge Tube (GDT) DIP Type

V_s : 70 ~ 4500 V

I_n (8/20 μs): 3 / 5 / 10 / 20 kA

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/DIP-Type.html

SD (-L) series

Learn more

V_s : 70 ~ 800 V

I_n (8/20 μs): 5 kA

Dimensions: Φ5.0 × 5.0 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/DIP-Type/SD(-L)-series.html

SF series

Learn more

V_s : 70 ~ 4500 V

I_n (8/20 μs): 3 kA / 5 kA / 10 kA

Dimensions: Φ5.5 × 6.0 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/DIP-Type/SF-series.html

SE series

Learn more

V_s : 70 ~ 4500 V

I_n (8/20 μs): 5 / 10 / 20 kA

Dimensions: Φ8.0 × 6.0 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/DIP-Type/SE-series.html

TZ (-L) series

Learn more

V_s : 75 ~ 600 V

I_n (8/20 μs): 5 kA / 10 kA

Dimensions: Φ5.0 × 7.6 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/DIP-Type/TZ(-L)-series.html

TB series

Learn more

V_s : 90 ~ 600 V

I_n (8/20 μs): 5 / 10 kA

Dimensions: Φ6.0 × 8.0 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/DIP-Type/DIP-Type/TB-series.html

TR (-L) series

Learn more

V_s : 90 ~ 600 V

I_n (8/20 μs): 10 kA / 20 kA

Dimensions: Φ8.0 × 10.0 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/DIP-Type/TR(-L)-series.html

5.3

Gas Discharge Tube (GDT) High Surge Type

V_s : 90 ~ 3000 V

I_n (8/20 μs): 20 / 40 / 80 / 100 kA

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/High-Surge-Type.html

Learn more

SPA series

V_s : 350 ~ 800 V
I_n (8/20 μs): 40 kA
Dimensions: Φ11.8 × 17.0 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/High-Surge-Type/SPA-series.html

Learn more

SPB series

V_s : 90 ~ 2000 V
I_n (8/20 μs): 20 kA
Dimensions: Φ11.8 × 6.2 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/High-Surge-Type/SPB-series.html

Learn more

SPC series

V_s : 350 ~ 1000 V
I_n (8/20 μs): 20 kA
Dimensions: Φ11.8 × 4.2 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/High-Surge-Type/SPC-series.html

Learn more

SPJ series

V_s : 350 ~ 1500 V
I_n (8/20 μs): 40 kA
Dimensions: Φ16.0 × 4.5 mm

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/High-Surge-Type/SPJ-series.html

Learn more

SPI series

V_s : 350 ~ 1500 V
I_n (8/20 μs): 40 kA
Dimensions: Φ16.0 × 8.0 mm
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/High-Surge-Type/SPI-series.html

Learn more

SPH series

V_s : 350 ~ 800 V
I_n (8/20 μs): 40 kA
Dimensions: Φ18.0 × 6.7 mm
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/High-Surge-Type/SPH-series.html

Learn more

SPK series

V_s : 90 ~ 800 V
I_n (8/20 μs): 40 kA
Dimensions: Φ15.0 × 3.0mm
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/High-Surge-Type/SPK-series.html

Learn more

SPP series

V_s : 600 ~ 800 V
I_n (8/20 μs): 100 kA
Dimensions: Φ30.0 × 12.0 mm
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/High-Surge-Type/SPP-series.html

Learn more

SPR series

V_s : 600 ~ 3000 V
I_n (8/20 μs): 40 kA
Dimensions: Φ20.0 × 6.0 mm
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/High-Surge-Type/SPR-series.html

Learn more

SPS series

V_s : 600 ~ 800 V
I_n (8/20 μs): 80 kA
Dimensions: Φ24.0 × 10.0 mm
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/High-Surge-Type/SPS-series.html

Learn more

SPV series

V_s : 350 ~ 800 V
I_n (8/20 μs): 40 kA
Dimensions: Φ20.0 × 4.0 mm
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/High-Surge-Type/SPV-series.html

Learn more

TPA series

V_s : 800 ~ 1400 V
I_n (8/20 μs): 20 kA
Dimensions: L16.0×W8.4×H9.3 mm
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Gas-Discharge-Tube-GDT/High-Surge-Type/TPA-series.html

Limiting Transient Overvoltage and Discharging Surge Current

Overvoltage protection is also known as surge protection. Overvoltage protection components are used to limit transient overvoltage and discharge surge current.

Applications

Communication Power Supply, New Energy Equipment, Industrial Control Equipment, Security, Lightning Protection Products

SETsafe | SETfuse Solution

TGDT not only has the same function as GDT to limit the overvoltage amplitude and discharge inrush current, but also has the ability to disengage the GDT from the main circuit by the action of a thermal protection component when the GDT deteriorates or suffers freewheeling damage.

6

Thermally Protected Gas Discharge Tube (TGDT)

U_C : 255 VAC

V_S : 600 V (480 ~ 720 V)

I_n (8/20μs): 30 ~ 40 kA

I_{imp} (10 / 350 μs): 6 ~ 8 kA

I_{fi} : 100 A (255 VAC)

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Thermally-Protected-Gas-Discharge-Tube-TGDT.html

Limiting Transient Overvoltage and Discharging Surge Current

Overvoltage protective device is for limiting transient overvoltage and discharging surge current.

Applications

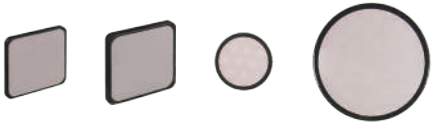
Power Supply, Telecom, Renewable Energy, Rail Way System, Home Appliances, Lighting, Medical Equipment and Security System, Surge Protector

SETsafe | SETfuse Solution

Metal Oxide Varistor (MOV) has excellent V-I characteristics, large surge capacity, no follow current, good voltage limiting capacity, fast response, high reliability. It is widely used for suppressing surges, limiting operating overvoltage, and reducing electrical clearance.

Metal Oxide Varistor & MOV Disk

Four performance levels

Standard Type	Metal Oxide Varistor & MOV Disk 
High Surge Type	Metal Oxide Varistor 
Lightning Protection Type For T1	MOV Disk 
Lightning Protection Type For T2	MOV Disk 

7.1

Metal Oxide Varistor & MOV Disk Standard Type

V_{ac} : 14 ~ 750 VAC

I_{max} : 0.5 ~ 70 kA

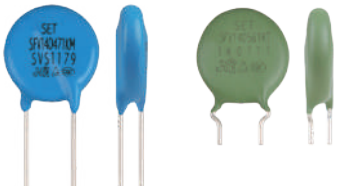
UCT : 85 °C, 105 °C, 125 °C

RoHS REACH

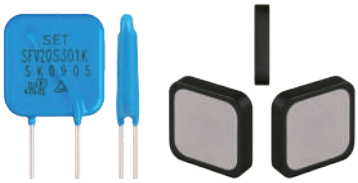
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type.html

Disk Shape

1 Round



2 Square



Metal Oxide Varistor & MOV Disk Standard Type

1 Disk Shape: Round

Learn more

SFV7D series

V_{ac} : 14 ~ 510 VAC

I_{max} : 0.5 ~ 1.75 kA

UCT : 85 °C (220 ~ 680), 105 °C (820 ~ 821)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV7D-series.html

Learn more

SFV10D series

V_{ac} : 14 ~ 750 VAC

I_{max} : 1 ~ 3.5 kA

UCT : 85 °C (220 ~ 680), 105 °C (820 ~ 122)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV10D-series.html

1 Disk Shape: Round

Learn more

SFV14D series

V_{ac} : 14 ~ 750 VAC
I_{max} : 2 ~ 6 kA
UCT : 85 °C (220 ~ 680), 105 °C (820 ~ 122)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV14D-series.html

Learn more

SFV20D series

V_{ac} : 14 ~ 750 VAC
I_{max} : 3 ~ 10 kA
UCT : 85 °C (220 ~ 680), 105 °C (820 ~ 122)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV20D-series.html

Learn more

SFV25D series

V_{ac} : 14 ~ 750 VAC
I_{max} : 3 ~ 20 kA
UCT : 85 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV25D-series.html

Learn more

SFV53D series

V_{ac} : 50 ~ 750 VAC
I_{max} : 70 kA
UCT : 85 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV53D-series.html

Learn more

SFV7D M series

V_{ac} : 50 ~ 510 VAC
I_{max} : 1.75 kA
UCT : 125 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV7D-M-series.html

Learn more

SFV10D M series

V_{ac} : 50 ~ 750 VAC
I_{max} : 3.5 kA
UCT : 125 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV10D-M-series.html

1 Disk Shape: Round

Learn more

SFV14D M series

V_{ac} : 50 ~ 750 VAC
I_{max} : 6 kA
UCT : 125 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV14D-M-series.html

Learn more

SFV20D M series

V_{ac} : 50 ~ 750 VAC
I_{max} : 10 kA
UCT : 125 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV20D-M-series.html

Learn more

SFV25D M series

V_{ac} : 30 ~ 750 VAC
I_{max} : 6 ~ 20 kA
UCT : 125 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV25D-M-series.html

Learn more

SFV7D T series

V_{ac} : 14 ~ 510 VAC
I_{max} : 0.5 ~ 1.75 kA
UCT : 125 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV7D-T-series.html

Learn more

SFV10D T series

V_{ac} : 14 ~ 750 VAC
I_{max} : 1 ~ 3.5 kA
UCT : 125 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV10D-T-series.html

Learn more

SFV14D T series

V_{ac} : 14 ~ 750 VAC
I_{max} : 2 ~ 6 kA
UCT : 125 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV14D-T-series.html

Metal Oxide Varistor & MOV Disk
Standard Type

1
Disk Shape: Round

Learn more

SFV20D T series
V_{ac} : 14 ~ 750 VAC
I_{max} : 3 ~ 10 kA
UCT : 125 ℃

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV20D-S-series.html

Learn more

SFV25D T series
V_{ac} : 30 ~ 750 VAC
I_{max} : 6 ~ 20 kA
UCT : 125 ℃

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV25D-S-series.html

Metal Oxide Varistor & MOV Disk
Standard Type

2
Disk Shape: Square

Learn more

SFV10S series
V_{ac} : 14 ~ 510 VAC
I_{max} : 2 ~ 5 kA
UCT : 85 ℃

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV10S-series.html

Learn more

SFV15S series
V_{ac} : 14 ~ 510 VAC
I_{max} : 3 ~ 10 kA
UCT : 85 ℃

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV15S-series.html

2 Disk Shape: Square

Learn more

SFV20S series

V_{ac} : 14 ~ 750 VAC
I_{max} : 3 ~ 15 kA
UCT : 85 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV20S-series.html

Learn more

SFV25S series

V_{ac} : 14 ~ 750 VAC
I_{max} : 3 ~ 25 kA
UCT : 85 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV25S-series.html

Learn more

SFV34S series

V_{ac} : 30 ~ 750 VAC
I_{max} : 20 ~ 40 kA
UCT : 85 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/SFV34S-series.html

Learn more

YMJ20S series

V_{ac} : 50 ~ 750 VAC
I_{max} : 15 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/YMJ20S-series.html

Learn more

YMJ25S series

V_{ac} : 50 ~ 750 VAC
I_{max} : 25 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/YMJ25S-series.html

Learn more

YMJ34S series

V_{ac} : 50 ~ 750 VAC
I_{max} : 40 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-Standard-Type/YMJ34S-series.html

7.2

Metal Oxide Varistor
High Surge Type

V_{ac} : 130 ~ 750 VAC

I_{max} : 8 ~ 50 kA

UCT : 85 °C, 105 °C, 125 °C,

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk-/MOV-and-MOV-Disk-High-Surge-Type.html

Learn more

SFV14D H series

V_{ac} : 130 ~ 420 VAC

I_{max} : 8 kA

UCT : 85 °C / 105 °C / 125 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk-/MOV-and-MOV-Disk-High-Surge-Type/SFV140-H-series.html

Learn more

SFV20D H series

V_{ac} : 130 ~ 420 VAC

I_{max} : 13 kA

UCT : 85 °C / 105 °C / 125 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk-/MOV-and-MOV-Disk-High-Surge-Type/SFV200-H-series.html

Learn more

SFV25S H series

V_{ac} : 150 ~ 750 VAC

I_{max} : 27.5 kA

UCT : 85 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk-/MOV-and-MOV-Disk-High-Surge-Type/SFV250-H-series.html

Learn more

SFV34S H series

V_{ac} : 150 ~ 750 VAC

I_{max} : 50 kA

UCT : 85 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk-/MOV-and-MOV-Disk-High-Surge-Type/SFV340-H-series.html

7.3 MOV Disk-Lightning Protection Type For T1

V_{ac} : 150 ~ 680 VAC
I_n (8/20 μs): 20 / 25 / 30 kA
I_{max} (8/20 μs): 40 / 50 / 60 kA
I_{imp} (10/350 μs): 3.5 ~ 12.5 kA

cULus RoHS REACH

Learn more:
https://setsafe.com/Product/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk-Lightning-Protection-Type-For-T1.html

Learn more

YMJ34S T series

V_{ac} : 150 ~ 680 VAC
I_n (8/20 μs): 20 kA
I_{max} (8/20 μs): 40 kA
I_{imp} (10/350 μs): 3.5 ~ 8.0 kA

Learn more:
https://setsafe.com/Product/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-T1-Lightning-Protection-Type/YMJ34S-T-series.html

Learn more

YMJ33R T series

V_{ac} : 150 ~ 680 VAC
I_n (8/20 μs): 20 kA
I_{max} (8/20 μs): 40 kA
I_{imp} (10/350 μs): 4.0 ~ 7.0 kA

Learn more:
https://setsafe.com/Product/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-T1-Lightning-Protection-Type/YMJ33R-T-series.html

Learn more

YMJ36R T series

V_{ac} : 150 ~ 680 VAC
I_n (8/20 μs): 25 kA
I_{max} (8/20 μs): 50 kA
I_{imp} (10/350 μs): 5.0 ~ 8.5 kA

Learn more:
https://setsafe.com/Product/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-T1-Lightning-Protection-Type/YMJ36R-T-series.html

Learn more

YMJ40R T series

V_{ac} : 150 ~ 680 VAC
I_n (8/20 μs): 30 kA
I_{max} (8/20 μs): 60 kA
I_{imp} (10/350 μs): 6.5 ~ 12.5 kA

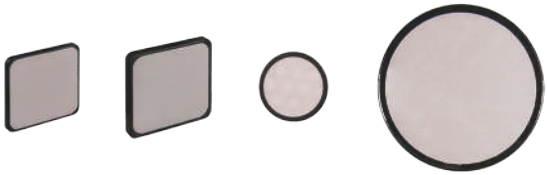
Learn more:
https://setsafe.com/Product/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-T1-Lightning-Protection-Type/YMJ40R-T-series.html

7.4 MOV Disk–Lightning Protection Type For T2

V_{ac} : 130 ~ 750 VAC
I_n (8/20 μs): 10 / 30 / 35 / 40 kA
I_{max} (8/20 μs): 20 / 60 / 70 / 80 kA

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-T1-Lightning-Protection-Type.html



Learn more

YMJ25D series

V_{ac} : 130 ~ 750 VAC
I_n (8/20 μs): 10 kA
I_{max} (8/20 μs): 20 kA

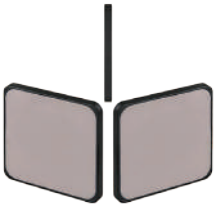
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-T2-Lightning-Protection-Type/YMJ25D-series.html

Learn more

YMJ53D series

V_{ac} : 150 ~ 750 VAC
I_n (8/20 μs): 35 kA
I_{max} (8/20 μs): 70 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-T2-Lightning-Protection-Type/YMJ53D-series.html



Learn more

YMJ37S series

V_{ac} : 150 ~ 750 VAC
I_n (8/20 μs): 30 kA
I_{max} (8/20 μs): 60 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-T2-Lightning-Protection-Type/YMJ37S-series.html

Learn more

YMJ40S series

V_{ac} : 150 ~ 750 VAC
I_n (8/20 μs): 40 kA
I_{max} (8/20 μs): 80 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Metal-Oxide-Varistor-MOV-and-MOV-Disk/MOV-and-MOV-Disk-T2-Lightning-Protection-Type/YMJ40S-series.html

Limiting Transient Overvoltage and Discharging Surge Current

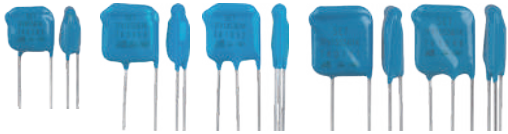
Overvoltage protective device is for limiting transient overvoltage and discharging surge current.

3 Solutions
Thermal Fuse & MOV (TFMOV)

Thermal Fuse Varistor

Thermal Fuse Varistor (TFV)

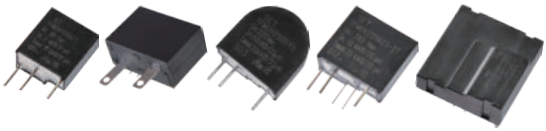
The TFV offers quick thermal response due to the close proximity of the integrated thermal element to the MOV body.



Thermal Fuse & MOV

Thermal Fuse & MOV (TFMOV)

TFMOVs not only have the same functions as MOVs to limit overvoltage and inrush current, but also they can fail-safe when MOV degradation, the MOV is disengaged from the main circuit by the action of the thermal protection component.



Thermally Protected Varistors

Thermally Protected Varistors (TFMOV)

TFMOVs not only have the same functions as MOVs to limit overvoltage and inrush current, but also they can fail-safe when MOV degradation, the MOV is disengaged from the main circuit by the action of the thermal protection component.

Limiting Transient Overvoltage and Discharging Surge Current

Overvoltage protective device is for limiting transient overvoltage and discharging surge current.

Applications

Power Supply, Home Appliances, Industrial Devices, Surge Protectors, Telecom Devices, AC Panel Protection Modules, AC Power Meters, Uninterruptable Power Supply (UPS)

SETsafe | SETfuse Solution

The TFV offers quick thermal response due to the close proximity of the integrated thermal element to the MOV body.

8.1

Thermal Fuse Varistor (TFV)

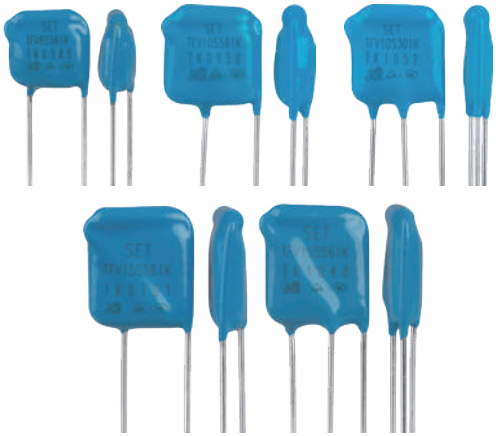
V_{ac} : 50 ~ 510 VAC

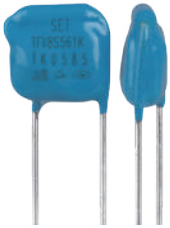
I_{max} : 3.5 ~ 10 kA

UCT : 105 ℃

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-Varistor-TFV.html





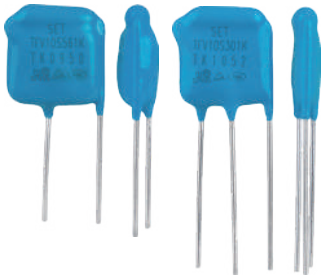
TFV8S series

V_{ac} : 50 ~ 510 VAC

I_{max} : 3.5 kA

UCT : 105 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-Varistor-TFV/TFV8S-series.html



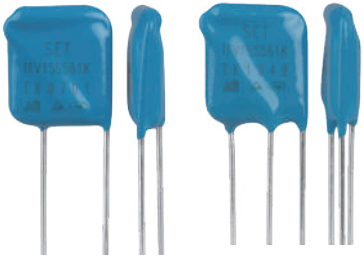
TFV10S series

V_{ac} : 50 ~ 510 VAC

I_{max} : 5 kA

UCT : 105 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-Varistor-TFV/TFV10S-series.html



TFV15S series

V_{ac} : 50 ~ 510 VAC

I_{max} : 10 kA

UCT : 105 °C

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-Varistor-TFV/TFV15S-series.html

Limiting Transient Overvoltages and Discharging Inrush Currents

Overvoltage protection, also known as surge protection, is used to limit transient overvoltages and discharge inrush currents.

Applications

Communication Equipment, String Inverters, AC and DC Power Supplies, Uninterruptible Power Supplies (UPS), Surge Protective Devices (SPD), Power Distribution Units (PDU), Electricity Meters

SETsafe | SETfuse Solution

TFMOVs not only have the same functions as MOVs to limit overvoltage and inrush current, but also they can fail-safe when MOV degradation, the MOV is disengaged from the main circuit by the action of the thermal protection component.

8.2 Thermal Fuse & MOV (TFMOV)

U_C: 17 ~ 750 VAC

I_n (8 / 20 μs): 1 ~ 40 kA

I_{max} (8 / 20 μs): 2 ~ 100 kA

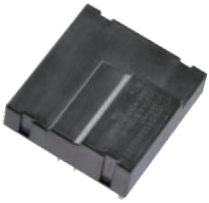
RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-and-MOV-TFMOV.html

Nominal Discharge Current I_n (8 / 20 μs)

1. 1 ~ 10 kA

2. 10 ~ 20 kA

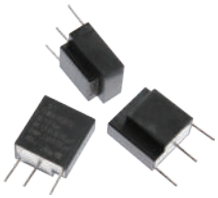


3. 20 ~ 40 kA

Thermal Fuse & MOV (TFMOV)

1

I_n (8 / 20 μs) : 1 ~ 10 kA

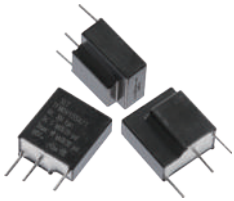


Learn more

TFMOV10S series

U_c : 17 ~ 510 VAC
I_n (8 / 20 μs): 1 ~ 3 kA
I_{max} (8 / 20 μs): 2 ~ 6 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-and-MOV-TFMOV/TFMOV10S-series.html



Learn more

TFMOV15S series

U_c : 17 ~ 510 VAC
I_n (8 / 20 μs): 1.5 ~ 5 kA
I_{max} (8 / 20 μs): 3 ~ 10 kA

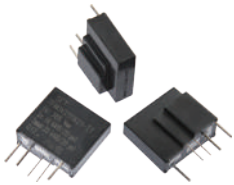
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-and-MOV-TFMOV/TFMOV15S-series.html

Learn more

TFMOV20S series

U_c : 17 ~ 750 VAC
I_n (8 / 20 μs): 1.5 ~ 7.5 kA
I_{max} (8 / 20 μs): 3 ~ 15 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-and-MOV-TFMOV/TFMOV20S-series.html

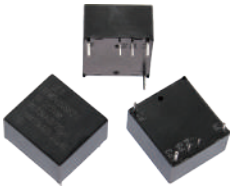


Learn more

TFMOV25S series

U_c: 17 ~ 750 VAC
I_n (8 / 20 μs): 3 ~ 10 kA
I_{max} (8 / 20 μs): 6 ~ 25 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-and-MOV-TFMOV/TFMOV25S-series.html



Learn more

TFMOV20SxxxL series

U_c : 30 ~ 420 VAC
I_n (8 / 20 μs): 2.5 ~ 7.5 kA
I_{max} (8 / 20 μs): 5 ~ 15 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-and-MOV-TFMOV/TFMOV20SxxxL-series.html

Learn more

TFMOV25SxxxL series

U_c : 30 ~ 420 VAC
I_n (8 / 20 μs): 4 ~ 10 kA
I_{max} (8 / 20 μs): 8 ~ 25 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-and-MOV-TFMOV/TFMOV25SxxxL-series.html

Thermal Fuse & MOV (TFMOV)

1

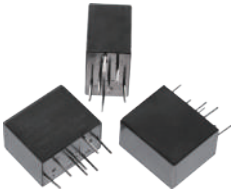
I_n (8 / 20 μs) : 1 ~ 10 kA

Learn more

TFMOV21R2P series

U_c : 30 ~ 320 VAC
I_n (8 / 20 μs): 2.5 x 2 ~ 7.5 x 2 kA
I_{max} (8 / 20 μs): 5 x 2 ~ 15 x 2 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-and-MOV-TFMOV/TFMOV21R2P-series.html



Learn more

TFMOV21R3P series

U_c : 30 ~ 320 VAC
I_n (8 / 20 μs): 2.5 x 3 ~ 7.5 x 3 kA
I_{max} (8 / 20 μs): 5 x 3 ~ 15 x 3 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-and-MOV-TFMOV/TFMOV21R3P-series.html

Learn more

TFMOV25D series

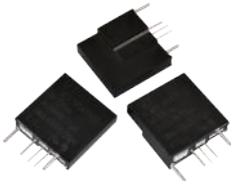
U_c : 17 ~ 750 VAC
I_n (8 / 20 μs): 1.5 ~ 10 kA
I_{max} (8 / 20 μs): 3 ~ 20 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-and-MOV-TFMOV/TFMOV25D-series.html

Thermal Fuse & MOV (TFMOV)

2

I_n (8 / 20 μs) : 10 ~ 20 kA



Learn more

TFMOV34S series

U_c : 30 ~ 750 VAC
I_n (8 / 20 μs): 10 ~ 20 kA
I_{max} (8 / 20 μs): 20 ~ 40 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-and-MOV-TFMOV/TFMOV34S-series.html

Learn more

TFMOV34SxxxL series

U_c : 30 ~ 420 VAC
I_n (8 / 20 μs): 10 ~ 20 kA
I_{max} (8 / 20 μs): 20 ~ 40 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-and-MOV-TFMOV/TFMOV34SxxxL-series.html

Learn more

TFMOV20K series

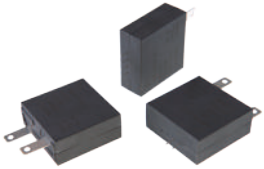
U_c : 50 ~ 750 VAC
I_n (8 / 20 μs): 15 ~ 20 kA
I_{max} (8 / 20 μs): 30 ~ 50 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-and-MOV-TFMOV/TFMOV20K-series.html

Thermal Fuse & MOV (TFMOV)

3

I_n (8 / 20 μs) : 30 ~ 40 kA



Learn more

TFMOV40K series

U_c : 50 ~ 750 VAC
I_n (8 / 20 μs): 30 ~ 40 kA
I_{max} (8 / 20 μs): 60 ~ 100 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermal-Fuse-and-MOV-TFMOV/TFMOV40K-series.html

Limiting Transient Overvoltages and Discharging Inrush Currents

Overvoltage protection, also known as surge protection, is used to limit transient overvoltages and discharge inrush currents.

Applications

Communication Equipment, String Inverters, AC and DC Power Supplies, Uninterruptible Power Supplies (UPS), Surge Protective Devices (SPD), Power Distribution Units (PDU), Electricity Meters

SETsafe | SETfuse Solution

TFMOVs not only have the same functions as MOVs to limit overvoltage and inrush current, but also they can fail-safe when MOV degradation, the MOV is disengaged from the main circuit by the action of the thermal protection component.

8.3 Thermally Protected Varistors (TFMOV)

Learn more:
https://setsafe.com/Product/Over-Voltage-Protection/TFV-and-TFMOV/Thermally-Protected-Varistors-TFMOV.html

- U_C: 50 ~ 750 VAC
- U_{cpv}: 500 ~ 1000 VDC
- I_n (8 / 20 µs): 5 / 10 / 20 kA
- I_{max} (8 / 20 µs): 10 / 25 / 40 kA
- I_{imp} (10 / 350 µs): 6 ~ 7.5 kA

RoHS REACH

Nominal Discharge Current I_n (8 / 20 µs)

1. 5 kA

2. 10 kA

3. 20 kA

Thermally Protected Varistors (TFMOV)

1

I_n (8 / 20 μs) : 5 kA

TFMOV05M series

EN 61643-11 T2+T3
EN 61643-31 T2+T3

U_C : 50 ~ 750 VAC
U_{cpv} : 65 ~ 1000 VDC
U_{oc} : 10 kV
I_n (8/20 μs): 5 kA
I_{max} (8/20 μs): 10 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermally-Protected-Varistors-TFMOV/TFMOV05M-series.html

Thermally Protected Varistors (TFMOV)

2

I_n (8 / 20 μs) : 10 kA

TFMOV10M series

UL 1449 TYPE 1CA/4CA
EN 61643-11 T2
EN 61643-31 T2

U_C : 50 ~ 680 VAC
U_{cpv} : 500 ~ 880 VDC
I_n (8 / 20 μs): 10 kA
I_{max} (8 / 20 μs): 25 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermally-Protected-Varistors-TFMOV/TFMOV10M-series.html

TFMOV20M series

UL 1449 TYPE 1CA/4CA
EN 61643-11 T2
EN 61643-31 T2

U_C : 50 ~ 750 VAC
U_{cpv} : 500 ~ 1000 VDC
I_n (8 / 20 μs): 20 kA
I_{max} (8 / 20 μs): 40 kA

Learn more:
https://setsafe.com/Product/Over-Voltage-Protection/TFV-and-TFMOV/Thermally-Protected-Varistors-TFMOV/TFMOV20M-series.html

TFMOV25M series

UL 1449 Type 4CA
EN/IEC 61643-11 T1+T2
EN 61643-31 T1+T2

U_C : 385 ~ 680 VAC
U_{cpv} : 505 ~ 900 VDC
I_{imp} (10 / 350 μs): 6 ~ 7.5 kA
I_n (8 / 20 μs): 20 kA
I_{max} (8 / 20 μs): 40 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/TFV-and-TFMOV/Thermally-Protected-Varistors-TFMOV/TFMOV25M-series.html

Limiting Transient Overvoltages and Discharging Inrush Currents

Overvoltage protection, also known as surge protection, is used to limit transient overvoltages and discharge inrush currents.

Applications

Communication Equipment, AC and DC Power Supplies, Uninterruptible Power Supplies (UPS), Surge Protective Devices (SPD), Embedded Power Supplies

SETsafe | SETfuse Solution

A single module can meet the protection requirements of common-mode, differential-mode, or full-mode. Integrated surge protection module can simplify the end product design and save space. Designed for surge protection of low-voltage AC or DC powered equipment.

9 Surge Protective Devices Module (SPD-M)

U_C: 30 ~ 460 VAC, 56 ~ 100 VDC

I_n (8 / 20 μs): 2.5 ~ 20 kA

I_{max} (8 / 20 μs): 5 ~ 40 kA

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Devices-Module-SPD-M.html

Apply to

1. AC Single-Phase System

2. AC Three-Phase System

3. 48V DC System

Surge Protective Devices Module (SPD-M)

1 Apply to AC Single-Phase System

Learn more

SM15SxxxP3 series

U_c : 50 ~ 385 VAC
I_n (8 / 20 μs): 2.5 ~ 5 kA
I_{max} (8 / 20 μs): 5 ~ 10 kA
Protection Mode: All-mode

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Devices-Module-SPD-M/SM15SxxxP3-series.html

Learn more

SM20MxxxA203 series

U_c : 320 / 385 VAC
I_n (8 / 20 μs): 20 kA
I_{max} (8 / 20 μs): 40 kA
Protection Mode: 1+1 (L - N, N - PE)

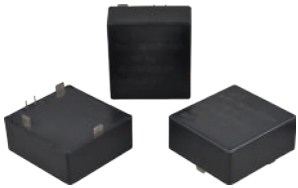
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Devices-Module-SPD-M/SM20MxxxA203-series.html

Learn more

SM34SxxxP1 series

U_c : 30 ~ 460 VAC
I_n (8 / 20 μs): 10 ~ 20 kA
I_{max} (8 / 20 μs): 20 ~ 40 kA
Protection Mode: 1+1 (L - N, N - PE) / (+ - -, - -PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Devices-Module-SPD-M/SM34SxxxP1-series.html



Learn more

SM34SxxxP2 series

U_c : 40 ~ 350 VAC
I_n (8 / 20 μs): 10 ~ 20 kA
I_{max} (8 / 20 μs): 20 ~ 40 kA
Protection Mode: (L / N - PE) / (+/ - - PE)

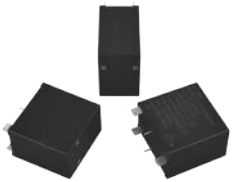
Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Devices-Module-SPD-M/SM34SxxxP2-series.html

Learn more

SM20(30)M230L205 series

U_c : 385 VAC
I_n (8 / 20 μs): 20 / 30 kA
I_{max} (8 / 20 μs): 40 / 60 kA
Protection Mode: 2+0 (L / N - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Devices-Module-SPD-M/SM20(30)M230L205-series.html



Learn more

SM15MxxxA203 series

U_c : 320 / 385 VAC
I_{imp} (10 / 350 μs): 4 kA
I_n (8 / 20 μs): 15 kA
I_{max} (8 / 20 μs): 40 kA
Protection Mode: 1+1 (L - N, N - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Devices-Module-SPD-M/SM15MxxxA203-series.html

Surge Protective Devices Module (SPD-M)

1 Apply to AC Single-Phase System

SM08B230N203 series

U_c : 320 VAC
I_{imp} (10 / 350 μs): 8 kA
I_n (8 / 20 μs): 20 kA
Protection Mode: 1+1 (L - N, N - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Devices-Module-SPD-M/SM08B230N203-series.html

Surge Protective Devices Module (SPD-M)

2 Apply to AC Three-Phase System

Learn more

SM20(30)M230L306 series

U_c : 385 VAC
I_n (8 / 20 μs): 20 / 30 kA
I_{max} (8 / 20 μs): 40 / 60 kA
Protection Mode: 3+0 (L - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Devices-Module-SPD-M/SM20(30)M230L306-series.html

Learn more

SM20(30)M230A404 series

U_c : 385 VAC
I_n (8 / 20 μs): 20 / 30 kA
I_{max} (8 / 20 μs): 40 / 60 kA
Protection Mode: 3+1 (L - N, N - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Devices-Module-SPD-M/SM20(30)M230A404-series.html

Surge Protective Devices Module (SPD-M)

3 Apply to 48V DC System

SM20KxxxP1 series

U_c : 56 ~ 100 VDC
I_n (8 / 20 μs): 20 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Devices-Module-SPD-M/SM20KxxxP1-series.html

Limiting Transient Overvoltages and Discharging Inrush Currents

Overvoltage protection, also known as surge protection, is used to limit transient overvoltages and discharge inrush currents.

4 Solutions
Surge Protective Device (SPD)

Apply to
1. Low-voltage Power Systems

Apply to
2. PV System

Apply to
3. Outdoor Lighting

Apply to
4. Signaling Networks

Limiting Transient Overvoltages and Discharging Inrush Currents

Overvoltage protection, also known as surge protection, is used to limit transient overvoltages and discharge inrush currents.

Applications

AC and DC Power Supply System, New energy, Residential Building, Communications, Internet Data Center (IDC), Power Distribution System

SETsafe | SETfuse Solution

The Dinrail SPD has failure protection, failure indication and remote signal monitoring, and has good environmental adaptability and can meet high reliability requirements in important locations.

10.1 SPD (Low-voltage Power Systems)

U_C : 150 ~ 1300 VAC
I_n (8 / 20 μs): 20 / 25 / 30 kA
I_{max} (8 / 20 μs): 40 / 50 / 60 kA
I_{imp} (10 / 350 μs): 5 ~ 12.5 kA

RoHS
REACH

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems.html

Apply to

1. **AC Single-Phase System**

2. **AC Three-Phase System**

3. **Split-Phase System**

1 Apply to AC Single-Phase System

Learn more

SD20(30)RxxxL205 series, T2

U_c : 150 ~ 385 VAC
I_n (8 / 20 μs): 20 / 30 kA
I_{max} (8 / 20 μs): 40 / 60 kA
Protection Mode: 2+0 (L / N - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD20(30)RxxxL205-series.html

Learn more

SD20(30)RxxxA203 series, T2

U_c : L - N: 150 ~ 385 VAC,
N - PE: 255 VAC
I_n (8 / 20 μs): 20 / 30 kA
I_{max} (8 / 20 μs): 40 / 60 kA
Protection Mode: 1+1 (L - N, N - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD20(30)RxxxA203-series.html

Learn more

SD20S230A203 / SD20S230L205 series, T2

U_c : 385 VAC (2+0)
L - N: 385 VAC, N - PE: 255 VAC (1+1)
I_n (8 / 20 μs): 20 kA
Protection Mode: 2+0 (L / N - PE),
1+1 (L - N, N - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD20S230A203-SD20S230L205-series.html

Learn more

SD25TxxxL100 series, T1+T2

U_c : 150 ~ 680 VAC
I_{imp} (10 / 350 μs): 5.0 ~ 12.5 kA
I_n (8 / 20 μs): 25 kA
I_{max} (8 / 20 μs): 50 kA
Protection Mode: 1P (Ld - Ld)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD25Txxxl_100-series.html

Learn more

SD25TxxxL205 series, T1+T2

U_c : 150 ~ 550 VAC
I_{imp} (10 / 350 μs): 7.5 ~ 12.5 kA
I_n (8 / 20 μs): 25 kA
I_{max} (8 / 20 μs): 50 kA
Protection Mode: 2+0 (L / N - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD25Txxxl_205-series.html

Learn more

SD25TxxxA203 series, T1+T2

U_c : L - N: 150 ~ 385 VAC, N - PE: 255 VAC
I_{imp} (10 / 350 μs): 11.0 ~ 12.5 kA
I_n (8 / 20 μs): 25 kA
I_{max} (8 / 20 μs): 50 kA
Protection Mode: 1+1 (L - N, N - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD25TxxxA203-series.html

SPD (Low-voltage Power Systems)

1 Apply to AC Single-Phase System

SD25B series, T1+T2

U_c : 275 VAC
I_{imp} (10/350 μs): 25 kA
I_n (8/20 μs): 25 kA
I_{max} (8/20 μs): 60 kA
I_{fi} : 6 kA @275 VAC

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD25B-series.html

SPD (Low-voltage Power Systems)

2 Apply to AC Three-Phase System

Learn more

SD20(30)RxxxL405 series, T2

U_c : 275 ~ 750 VAC
I_n (8 / 20 μs): 20 / 30 kA
I_{max} (8 / 20 μs): 40 / 60 kA
Protection Mode: 4+0 (L / N - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD20(30)RxxxL405-series.html

Learn more

SD20(30)RxxxA404 series, T2

U_c : L — N: 335 ~ 440 VAC,
N — PE: 255 VAC
I_n (8 / 20 μs): 20 / 30 kA
I_{max} (8 / 20 μs): 40 / 60 kA
Protection Mode: 3+1 (L - N, N - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD20(30)RxxxA404-series.html

Learn more

SD20S230A404 / SD20S230L405 series, T2

U_c : 385 VAC (4+0)
L - N: 385 VAC, N - PE: 255 VAC (3+1)
I_n (8 / 20 μs): 20 kA
Protection Mode: 4+0 (L / N - PE) /
3+1 (L - N, N - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD20S230A404-SD20S230L405-series.html

Learn more

SD20S230A404 (3P) series, T2

U_c : L - N: 385 VAC,
N - PE: 255 VAC
I_n (8 / 20 μs): 20 kA
I_{max} (8 / 20 μs): 40 kA
Protection Mode: 3+1 (L - N, N - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD20S230A404-series.html

Learn more

SD25TxxxL306 series, T1+T2

U_c : 150 ~ 680 VAC
I_{imp} (10 / 350 μs): 5.0 ~ 12.5 kA
I_n (8 / 20 μs): 25 kA
I_{max} (8 / 20 μs): 50 kA
Protection Mode: 3+0 (L - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD25TxxxL306-3P-series.html

Learn more

SD25TxxxL306 (4P) series, T1+T2

U_c : 880 / 1300 VAC
I_{imp} (10 / 350 μs): 5.0 / 10.0 kA
I_n (8 / 20 μs): 25 kA
I_{max} (8 / 20 μs): 50 kA
Protection Mode: 3+0 (L - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD25TxxxL306-4P-series.html

Learn more

SD25TxxxL405 series, T1+T2

U_c : 150 ~ 680 VAC
I_{imp} (10 / 350 μs): 5.0 ~ 12.5 kA
I_n (8 / 20 μs): 25 kA
I_{max} (8 / 20 μs): 50 kA
Protection Mode: 4+0 (L / N - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD25TxxxL405-series.html

Learn more

SD25TxxxA404 series, T1+T2

U_c : 150 ~ 385 VAC
I_{imp} (10 / 350 μs): 11.0 ~ 12.5 kA
I_n (8 / 20 μs): 25 kA
I_{max} (8 / 20 μs): 50 kA
Protection Mode: 3+1 (L - N, N - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD25TxxxA404-series.html

Learn more

SD25TS series, T1+T2

U_c : 1300 VAC
I_{imp} (10 / 350 μs): 12.5 kA
I_n (8 / 20 μs): 25 kA
I_{max} (8 / 20 μs): 50 kA
Protection Mode: 3+0 (L - PE)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD25TS-series.html

Learn more

SD25B series, T1+T2

U_c : 275 VAC
I_{imp} (10/350 μs): 25 kA
I_n (8/20 μs): 25 kA
I_{max} (8/20 μs): 60 kA
I_{fi} : 6 kA @275 VAC

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD25B-series.html

SPD (Low-voltage Power Systems)

3 Apply to Split-Phase Power System

Learn more

SD25TxxxL201 series, T1+T2

U_c : 150 ~ 320 VAC
I_{imp} (10 / 350 μs): 11.0 / 12.5 kA
I_n (8 / 20 μs): 25 kA
I_{max} (8 / 20 μs): 50 kA
Protection Mode: 2+0 (L1 - G, L2 - G)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD25TxxxL201-series.html

Learn more

SD25TxxxA301/L302, series T1+T2

U_c : 150 ~ 385 VAC
I_{imp} (10 / 350 μs): 11.0 / 12.5 kA
I_n (8 / 20 μs): 25 kA
I_{max} (8 / 20 μs): 50 kA
Protection Mode: 2+1 (L1 - N, L2 - N, N - G)

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Low-voltage-Power-Systems/SD25TxxxA301-L302-series.html

Limiting Transient Overvoltages and Discharging Inrush Currents

Overvoltage protection, also known as surge protection, is used to limit transient overvoltages and discharge inrush currents.

Applications

Photovoltaic Inverter, Distributed Power Supply, DC Power Supply, Energy Storage Converter, DC Combiner Box

SETsafe | SETfuse Solution

The Dinrail SPD has failure protection, failure indication and remote signal monitoring, and has good environmental adaptability and can meet high reliability requirements in important locations.

10.2

SPD (PV System)

U_{cpv} : (180 ~ 1500) VDC
I_{imp} (10 / 350 μs): (5.0 ~ 12.5) kA
I_n (8 / 20 μs): 25 kA
I_{max} (8 / 20 μs): 50 kA

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-PV-System.html

SD25TxxxL211PV series, T1+T2

U_{cpv} : 180 ~ 895 VDC
I_{imp} (10 / 350 μs): 5.0 ~ 12.5 kA
I_n (8 / 20 μs): 25 kA
I_{max} (8 / 20 μs): 50 kA
Protection Mode: U

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-PV-System/SD25TxxxL211PV-series.html

SD25TxxxL312PV series, T1+T2

U_{cpv} : 660 ~ 1500 VDC
I_{imp} (10 / 350 μs): 5.0 ~ 12.5 kA
I_n (8 / 20 μs): 25 kA
I_{max} (8 / 20 μs): 50 kA
Protection Mode: Y

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-PV-System/SD25TxxxL312PV-series.html

SD25TS series, T1+T2

U_{cpv} : 1500 VDC
I_{imp} (10 / 350 μs): 12.5 kA
I_n (8 / 20 μs): 25 kA
I_{max} (8 / 20 μs): 50 kA
Protection Mode: Y

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-PV-System/SD25TS-series.html

SD20RxxxL312PV series, T2

U_{cpv} : 1000 ~ 1500 VDC
I_n (8/20 μs): 20 kA
I_{max} (8/20 μs): 40 kA
Protection Mode: Y

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-PV-System/SD20RxxxL312PV-series.html

Limiting Transient Overvoltages and Discharging Inrush Currents

Overvoltage protection, also known as surge protection, is used to limit transient overvoltages and discharge inrush currents.

Applications

Outdoor Street Lights, Parking Lot Lights, Highway Street Lights, Scenery Lights, Traffic Lights, RV Power Supply System, Heating Ventilation Air-Conditioning and Cooling (HVAC)

SETsafe | SETfuse Solution

The Dinrail SPD has failure protection, failure indication and remote signal monitoring, and has good environmental adaptability and can meet high reliability requirements in important locations.

10.3

SPD (Outdoor Lighting)

U_C : 150 ~ 550 VAC

I_n (8 / 20 μs): 5 / 10 kA

I_{max} (8 / 20 μs): 10 / 15 / 20 / 25 kA

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Outdoor-Lighting.html

Learn more

SD05K series

U_c : 150 ~ 420 VAC
I_n (8/20 μs): 5 kA
I_{max} (8/20 μs): 10 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Outdoor-Lighting/SD05K-series.html

Learn more

SD05C series

U_c : 150 ~ 550 VAC
I_n (8/20 μs): 5 kA
I_{max} (8/20 μs): 10 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Outdoor-Lighting/SD05C-series.html

Learn more

SD10C series

U_c : 150 ~ 550 VAC
I_n (8/20 μs): 10 kA
I_{max} (8/20 μs): 15 / 25 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Outdoor-Lighting/SD10C-series.html

Learn more

SD10K series

U_c : 300 ~ 385 VAC
I_n (8/20 μs): 10 kA
I_{max} (8/20 μs): 20 kA

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Outdoor-Lighting/SD10K-series.html

Learn more

SD10C120/240 series

U_c : 150 / 300 VAC
I_n (8/20 μs): 10 kA
I_{max} (8/20 μs): 15 / 25 kA
UL 1449 Type 1 SPD

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Outdoor-Lighting/SD10C120-240-series.html

Learn more

SD10KxxxD303(H100) series

U_c : 320 VAC
I_n (8/20 μs): 10 / 15 kA
I_{max} (8/20 μs): 20 kA
U_{oc} : 20 / 30 kV

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Outdoor-Lighting/SD10KxxxD303H100-series.html

Limiting Transient Overvoltages and Discharging Inrush Currents

Overvoltage protection, also known as surge protection, is used to limit transient overvoltages and discharge inrush currents.

Applications

Communications, Internet Data Center (IDC)

SETsafe | SETfuse Solution

The Dinrail SPD has failure protection, failure indication and remote signal monitoring, and has good environmental adaptability and can meet high reliability requirements in important locations.

10.4

SPD (Signaling Networks)

U_c : 6 ~ 33 VDC

I_n (8 / 20 μs): 5 kA

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Voltage-Protection/Surge-Protective-Device-SPD/SPD-for-Signaling-Networks.html

Over Current Protection

Learn more

https://setsafe.com/Products/Over-Current-Protection.html

SETsafe | SETfuse Products

- 1 Miniature Fuses
- 1.1 Cartridge Fuse-links (CFL)
- 1.2 Sub-miniature Fuse-links (SFL)
- 1.3 Surface Mount Fuse-links (SMFL)
- 1.4 Fusible Wirewound Resistor (RXF)
- 1.5 Thermal-Link & Fusing Resistor (TRXF)
- 1.6 Thermally Protected Resistor (TPR)
- 2 Low Voltage Fuses (LV Fuses)
- 2.1 LV Fuses for ESS (Energy Storage System)
- 2.2 LV Fuses for EV Charging
- 2.3 LV Fuses for PV
- 2.4 LV Fuses for Surge Protector
- 2.5 LV Fuses - Fuse Holder

Glossary

I_n	Rated Current
U_n	Rated Voltage
P	Power Type
R	Rated Resistance
T_f	Rated Functioning Temp.
I_1	Rated Breaking Capacity

Short Circuit and Overload Protection

Mainly used to solve the safety hazard caused by short circuit or overload.

6 Solutions
Miniature Fuses

1. Cartridge Fuse-links (CFL)

2. Sub-miniature Fuse-links (SFL)

3. Surface Mount Fuse-links (SMFL)

4. Fusible Wirewound Resistor (RXF)

5. Thermal-Link & Fusing Resistor (TRXF)

6. Thermally Protected Resistor (TPR)

Short Circuit and Overload Protection

Mainly used to solve the safety hazard caused by short circuit or overload.

Applications

Power Supply, Household Appliance, SPD, General Lighting, Smart Home, Office Equipment, Electric Tool, Medical Equipment, BS Plug & Socket, Cable, Instruments and Apparatuses, Communication Equipment

SETsafe | SETfuse Solution

When the circuit works normally, it is equivalent to a wire, which can conduct the circuit continuously and stably. When the current fluctuates due to circuit instability or external interference, it should also be able to withstand a certain range of overload. Only when overload or short circuit happens, Miniature Fuses can blow fast to protect the circuit.

1.1

Cartridge Fuse-links (CFL)

I_n: 0.4 ~ 50 A

U_n: 125 ~ 600 VAC / 75 ~ 600 VDC

Dimensions: Φ6.3 × 31.8 mm,
Φ6.3 × 25.4 mm, Φ5 × 20 mm

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Cartridge-Fuse-links-CFL.html

Characteristic

1 Fast Acting

2 Time-Lag

Cartridge Fuse-links (CFL)

1 Characteristic: Fast Acting

Learn more

SCF632A & SCF632AP series

Body Materials: Ceramic
Characteristic: High Speed
I_n : 15 ~ 30 A
U_n : 250 ~ 500 VAC / 250 ~ 600 VDC
Dimensions: Φ6.35 × 31.8 mm

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Cartridge-Fuse-links-CFL/SCF632A-and-SCF632AP-series.html

Learn more

SCF632 & SCF632P series

Body Materials: Ceramic
I_n : 0.5 ~ 30 A
U_n : 250 ~ 600 VAC / VDC
Dimensions: Φ6.35 × 31.8 mm

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Cartridge-Fuse-links-CFL/SCF632-and-SCF632P-series.html

Learn more

SCF625 & SCF625P series

Body Materials: Ceramic
Characteristic: Fast Acting
I_n : 5 ~ 50 A
U_n : 250 VAC, 75 ~ 400 VDC
Dimensions: Φ6.35 × 25.4 mm

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Cartridge-Fuse-links-CFL/SCF625-and-SCF625P-series.html

Learn more

SCF520 & SCF520P series

Body Materials: Ceramic
Characteristic: Fast Acting
I_n : 0.4 ~ 25 A
U_n : 125 ~ 600 VAC / VDC
Dimensions: Φ5 × 20 mm

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Cartridge-Fuse-links-CFL/SCF520-SCF520P-series.html

Learn more

SGF520 series

Body Materials: Glass
Characteristic: Fast Acting
I_n : 0.5 ~ 20 A
U_n : 250 VAC
Dimensions: Φ5 × 20 mm

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Cartridge-Fuse-links-CFL/SGF520-series.html

Cartridge Fuse-links (CFL)

2 Characteristic: Time-Lag

Learn more

SC625 series

Body Materials: Ceramic
Characteristic: Fast / Medium Acting
I_n : 3 ~ 13 A
U_n : 264 VAC
Dimensions: Φ6.3 × 25.4 mm

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Cartridge-Fuse-links-CFL/SC625-series.html

Learn more

SCT520 & SCT520P series

Body Materials: Ceramic
Characteristic: Time-Lag
I_n : 0.4 ~ 30 A
U_n : 125 ~ 500 VAC / VDC
Dimensions: Φ5 × 20 mm

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Cartridge-Fuse-links-CFL/SCT520-SCT520P-series.html

Learn more

SGT520 series

Body Materials: Glass
Characteristic: Time-Lag
I_n : 0.5 ~ 20 A
U_n : 250 VAC
Dimensions: Φ5 × 20 mm

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Cartridge-Fuse-links-CFL/SGT520-series.html

Short Circuit and Overload Protection

Mainly used to solve the safety hazard caused by short circuit or overload.

Applications

Power Supply, Household Appliance, SPD, General Lighting, Smart Home, Office Equipment, Electric Tool, Medical Equipment, Instruments and Apparatuses, Communication Equipment

SETsafe | SETfuse Solution

When the circuit works normally, it is equivalent to a wire, which can conduct the circuit continuously and stably. When the current fluctuates due to circuit instability or external interference, it should also be able to withstand a certain range of overload. Only when overload or short circuit happens, Miniature Fuses can blow fast to protect the circuit.

1.2 Sub-miniature Fuse-links (SFL)

I_n: 0.1 ~ 20 A

U_n: 125 ~ 400 VAC

Dimensions: (W4 × H7 × L8) mm

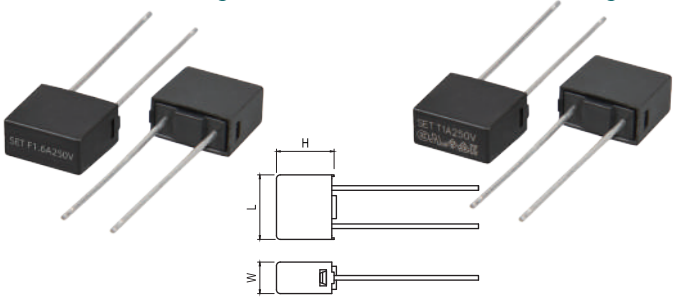
RoHS
REACH

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Sub-miniature-Fuse-links-SFL/SPF478-series.html

Characteristic

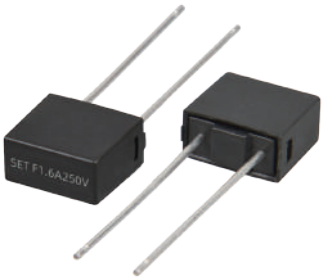
1 Fast Acting

2 Time-Lag



Sub-miniature Fuse-links (SFL)

1 Characteristic: Fast Acting



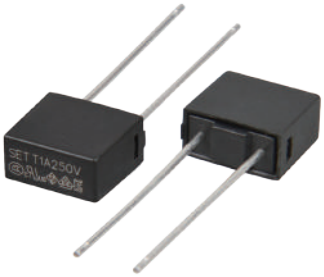
SPF478 series

Body Materials: Plastic
Characteristic: Fast Acting
I_n : 1 ~ 10 A
U_n : 125 ~ 400 VAC
Dimensions: W4 × H7 × L8 mm

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Sub-miniature-Fuse-links-SFL/SPF478-series.html

Sub-miniature Fuse-links (SFL)

2 Characteristic: Time-Lag



SPT478 series

Body Materials: Plastic
Characteristic: Time-Lag
I_n : 0.1 ~ 20 A
U_n : 125 ~ 400 VAC
Dimensions: W4 × H7 × L8 mm

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Sub-miniature-Fuse-links-SFL/SPT478-series.html

Short Circuit and Overload Protection

Mainly used to solve the safety hazard caused by short circuit or overload.

Applications

Power Supply, Household Appliance, SPD, General Lighting, Smart Home, Office Equipment, Electric Tool, Medical Equipment, Instruments and Apparatuses, Communication Equipment

SETsafe | SETfuse Solution

When the circuit works normally, it is equivalent to a wire, which can conduct the circuit continuously and stably. When the current fluctuates due to circuit instability or external interference, it should also be able to withstand a certain range of overload. Only when overload or short circuit happens, Miniature Fuses can blow fast to protect the circuit.

1.3 Surface Mount Fuse-links (SMFL)

I_n: 0.1 ~ 40 A

U_n: 125 ~ 350 VAC, 24 ~ 250 VDC

Dimensions: W2.7 × H2.7 × L6.3 mm

W3.2 × H3.2 × L10.3 mm

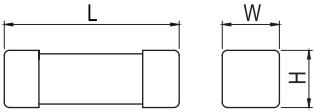
RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Surface-Mount-Fuse-links-SMFL.html

Characteristic

1 Fast Acting

2 Time-Lag



Surface Mount Fuse-links (SMFL)

1 Characteristic: Fast Acting

Learn more

SCF1032 series

Body Materials: Ceramic
Characteristic: Fast Acting
I_n : 0.5 ~ 40 A
U_n : 125 ~ 250 VAC, 32 ~ 250 VDC
Dimensions: W3.2 × H3.2 × L10.3 mm

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Surface-Mount-Fuse-links-SMFL/SCF1032-series.html

Learn more

SCF6125 series

Body Materials: Ceramic
Characteristic: Fast Acting
I_n : 0.5 ~ 20 A
U_n : 125 ~ 250 VAC, 24 ~ 125 VDC
Dimensions: W2.7 × H2.7 × L6.3 mm

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Surface-Mount-Fuse-links-SMFL/SCF6125-series.html

Surface Mount Fuse-links (SMFL)

2 Characteristic: Time-Lag

Learn more

SCT1032 series

Body Materials: Ceramic
Characteristic: Time-Lag
I_n : 0.1 ~ 15 A
U_n : 125 ~ 350 VAC, 32 ~ 250 VDC
Dimensions: W3.2 × H3.2 × L10.3 mm

Learn more

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Surface-Mount-Fuse-links-SMFL/SCT1032-series.html

Learn more

SCT6125 series

Body Materials: Ceramic
Characteristic: Time-Lag
I_n : 0.2 ~ 12.5 A
U_n : 125 ~ 350 VAC, 32 ~ 125 VDC
Dimensions: W2.7 × H2.7 × L6.3 mm

Learn more

Learn more
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Surface-Mount-Fuse-links-SMFL/SCT6125-series.html

Short Circuit and Overload Protection

Mainly used to solve the safety hazard caused by short circuit or overload.

Applications

Power Supply, General Lighting, Power Strip, Personal Care Application, Smart Home, Security & Protection

SETsafe | SETfuse Solution

Fusible Wirewound Resistor (RXF) is a power resistor, which is made by winding a resistive element on a ceramic core, and the core is coated by insulation coating. As a Protective Component, RXF works as a fixed resistor in normal operation, and is designed to open the circuit under the overload condition.

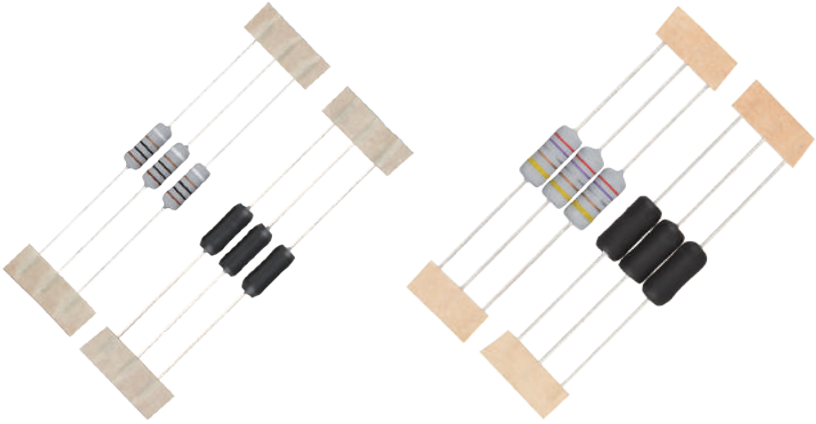
1.4 Fusible Wirewound Resistor (RXF)

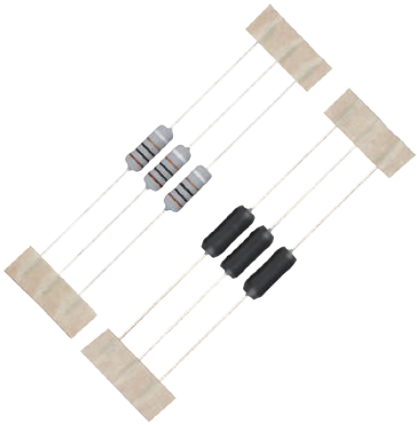
P : 1 W, 2 W

R : 0.27 ~ 1000 Ω

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Fusible-Wirewound-Resistor-RXF.html

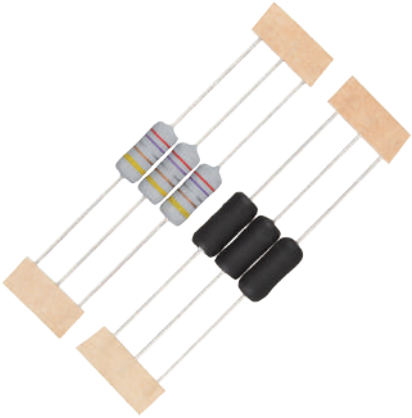




RXF21SB series

P : 1 W
R : 0.27 ~ 800 Ω
Resistance Tolerance: 5% / 10%

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Fusible-Wirewound-Resistor-RXF/RXF21SB-series.html



RXF21SC series

P : 2 W
R : 0.27 ~ 1000 Ω
Resistance Tolerance: 5% / 10%

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Fusible-Wirewound-Resistor-RXF/RXF21SC-series.html

Short Circuit and Overload Protection

Mainly used to solve the safety hazard caused by short circuit or overload.

Applications

Power Supply, General Lighting, Power Strip, Personal Care Application, Smart Home, Security & Protection

SETsafe | SETfuse Solution

Thermal-Link & Fusing Resistor (TRXF) is an unique type of Power Resistor, with Over Temp. and Over Current Protections. Alloy Thermal-Link (ATCO) is placed through the core of Fusible Wirewound Resistor (RXF) and in series with RXF. TRXF has the same physical size as ordinary RXF as well as large fault current protection. Besides, TRXF can effectively solve the hidden danger of continuous abnormal heat that ordinary RXF may cause when small fault current happens.

1.5

Thermal-Link & Fusing Resistor (TRXF)

P : 1 W, 2 W

R : 0.27 ~ 1000 Ω

T_f : 145 / 150 / 221 °C

RoHS
REACH

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Thermal-Link-Fusing-Resistor-TRXF.html

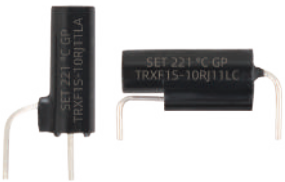
Structure Type

1 Case Type

2 Axial Type

Thermal-Link & Fusing Resistor (TRXF)

1 Structure Type: Case Type



Learn more

TRXF1S series

P : 1 W
R : 1 ~ 600 Ω
Resistance Tolerance: 5% / 10%
T_f : 145 / 221 ℃
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Thermal-Link-Fusing-Resistor-TRXF/TRXF1S-series.html

Learn more

TRXF1 series

P : 1 W
R : 0.27 ~ 800 Ω
Resistance Tolerance: 5% / 10%
T_f : 145 / 221 ℃
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Thermal-Link-Fusing-Resistor-TRXF/TRXF1-series.html

Learn more

TRXF2 series

P : 2 W
R : 0.27 ~ 1000 Ω
Resistance Tolerance: 5% / 10%
T_f : 150 / 221 ℃
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Thermal-Link-Fusing-Resistor-TRXF/TRXF2-series.html

Thermal-Link & Fusing Resistor (TRXF)

2 Structure Type: Axial Type

Learn more

TRXF1 (Axial Type) series

P : 1 W
R : 0.27 ~ 800 Ω
Resistance Tolerance: 5% / 10%
T_f : 221 ℃

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Thermal-Link-Fusing-Resistor-TRXF/TRXF1-Axial-Type-series.html

Learn more

TRXF2 (Axial Type) series

P : 2 W
R : 0.27 ~ 1000 Ω
Resistance Tolerance: 5% / 10%
T_f : 221 ℃

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Thermal-Link-Fusing-Resistor-TRXF/TRXF2-Axial-Type-series.html

Short Circuit and Overload Protection

Mainly used to solve the safety hazard caused by short circuit or overload.

Applications

Power Supply, Office Appliances, Household Appliances, Medical Equipment, Inverter

SETsafe | SETfuse Solution

Thermally Protected Resistor (TPR) is an unique type of Power Resistor, with Over Temp. and Over Current Protections. Thermally Protected Resistor (TPR) is a type of power resistor, where Alloy Thermal-Link (ATCO) and Fusible Wirewound Resistor (RXF) are in series encapsulated in a ceramic case with silicone cement. TPR has the same physical size as ordinary ceramic resistor while additionally providing fault current protection. TPR can also effectively protect against the damages to devices & equipment, caused by continuous heat dissipations by ceramic resistors due to fault currents.

1.6 Thermally Protected Resistor (TPR)

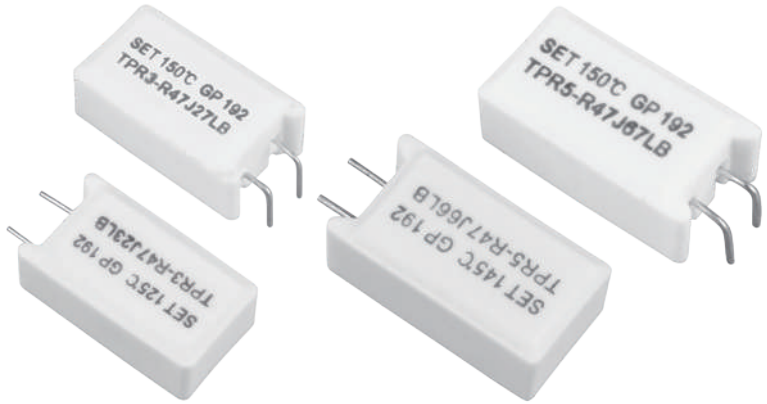
P : 3 W, 5 W

R : 0.27 ~ 1000 Ω

T_f : 115 / 125 / 130 / 135 / 145 / 150 / 221 °C

RoHS

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Thermally-Protected-Resistor-TPR.html



TPR3 series

P : 3 W
R : 0.27 ~ 800 Ω
Resistance Tolerance: 5% / 10%
T_f : 115 / 125 / 130 / 135 / 145 / 150 / 221 ℃

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Thermally-Protected-Resistor-TPR/TPR3-series.html

TPR5 series

P : 5 W
R : 0.27 ~ 1000 Ω
Resistance Tolerance: 5% / 10%
T_f : 115 / 125 / 130 / 135 / 145 / 150 / 221 ℃

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Miniature-Fuses/Thermally-Protected-Resistor-TPR/TPR5-series.html

Short Circuit and Overload Protection

Mainly used to solve the safety hazard caused by short circuit or overload.

Solutions

Low Voltage Fuses (LV Fuses)

1. LV Fuses for ESS

2. LV Fuses for EV Charging Infrastructure

3. LV Fuses for PV

4. LV Fuses for Surge Protection

5. LV Fuses – Fuse Holder

Short Circuit and Overload Protection

Mainly used to solve the safety hazard caused by short circuit or overload.

Applications

Battery Energy Storage System, Industrial Heaters, Welding Equipment, Metal Processing Equipment, UPS

SETsafe | SETfuse Solution

SETsafe|SETfuse Fuses for Energy Storage System are high speed fuses which are specially designed to protect ESS. It has the charcteristics of low I^2t, high speed fusing, good current limiting ability and excellent breaking capacity. It can be used to solve the security risks caused by energy storage system short circuit.

2.1 LV Fuses for ESS

U_n : 250 / 690 VAC
150 / 170 / 250 / 500 / 750 / 1000 / 1500 VDC
I_n : 10 ~ 3000 A
I_1 : 10 / 30 / 50 / 100 / 150 / 250 kA

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-LV-Fuses/LV-Fuses-for-Energy-Storage-System.html

Learn more

LFR15XL5

U_n : 1500 VDC
I_n : 1800 ~ 3000 A
I_1 : 150 kA
Utilization Category: aR & aBat
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-LV-Fuses/LV-Fuses-for-Energy-Storage-System/LFR15XL5-series.html

Learn more

LFR15XL4 series

U_n : 1500 VDC
I_n : 800 ~ 2000 A
I_1 : 150 kA
Utilization Category: aR & aBat
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-LV-Fuses/LV-Fuses-for-Energy-Storage-System/LFR15XL4-series.html

Learn more

LFR15XL3 series

U_n : 1500 VDC
I_n : 400 ~ 630 A
I_1 : 250 kA
Utilization Category: aR & aBat
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-LV-Fuses/LV-Fuses-for-Energy-Storage-System/LFR15XL3-series.html

Learn more

LFR15XL2 series

U_n : 1500 VDC
I_n : 100 ~ 450 A
I_1 : 250 kA
Utilization Category: aR & aBat
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-LV-Fuses/LV-Fuses-for-Energy-Storage-System/LFR15XL2-series.html

Learn more

LFR15XL1 series

U_n : 1500 VDC
I_n : 50 ~ 500 A
I_1 : 50 kA
Utilization Category: aR & aBat
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-LV-Fuses/LV-Fuses-for-Energy-Storage-System/LFR15XL1-series.html

Learn more

LFR01-xxxA10-BB series

U_n : 1000 VDC
I_n : 50 ~ 400 A
I_1 : 100 kA @ 1250 VAC / 50 kA @ 1000 VDC
Utilization Category: aR & aBat
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-LV-Fuses/LV-Fuses-for-Energy-Storage-System/LFR01-xxxA10-BB-series.html

Learn more

LFR000-xxxA10-BT series

U_n : 1000 VDC
I_n : 50 ~ 250 A
I_1 : 50 kA
Utilization Category: aR & aBat
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-LV-Fuses/LV-Fuses-for-Energy-Storage-System/LFR000-xxxA10-BT-series.html

Learn more

LFR22 series

U_n : 1000 VDC
I_n : 32 ~ 100 A
I_1 : 10 kA
Utilization Category: aR & aBat
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-LV-Fuses/LV-Fuses-for-Energy-Storage-System/LFR22-series.html

Learn more

LFR000-xxxA07-BT series

U_n : 750 VDC

I_n : 100 ~ 400 A

I_1 : 50 kA

Utilization Category: aR & aBat

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-UL-Fuses/UL-Fuses-for-Energy-Storage-System/LFR000-xxxA07-BT-series.html

Learn more

LFR20MN series

U_n : 750 VDC

I_n : 32 ~ 200 A

I_1 : 50 kA

Utilization Category: aR & aBat

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-UL-Fuses/UL-Fuses-for-Energy-Storage-System/LFR20MN-series.html

Learn more

LFR5A series

U_n : 500 VDC

I_n : 350 ~ 400 A

I_1 : 30 kA

Utilization Category: aR & aBat

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-UL-Fuses/UL-Fuses-for-Energy-Storage-System/LFR5A-series.html

Learn more

LFR15-xxxA06-BT series

U_n : 690 VAC / 500 VDC

I_n : 32 ~ 100 A

I_1 : 100 kA @ 690 VAC / 50 kA @ 500 VDC

Utilization Category: aR

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-UL-Fuses/UL-Fuses-for-Energy-Storage-System/LFR15-xxxA06-BT-series.html

Learn more

LFR1-xxxA02-BT series

U_n : 250 VDC

I_n : 200 ~ 800 A

I_1 : 50 kA

Utilization Category: aR & aBat

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-UL-Fuses/UL-Fuses-for-Energy-Storage-System/LFR1-xxxA02-BT-series.html

Learn more

LFG35-xxxA02-BT series

U_n : 250 VDC

I_n : 50 ~ 500 A

I_1 : 50 kA

Utilization Category: aR & aBat

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-UL-Fuses/UL-Fuses-for-Energy-Storage-System/LFG35-xxxA02-BT-series.html

Learn more

LFR20S series

U_n : 250 VAC / 150 VDC

I_n : 32 ~ 250 A

I_1 : 100 kA @ 250 VAC / 50 kA @ 150 VDC

Utilization Category: aR & aBat

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-UL-Fuses/UL-Fuses-for-Energy-Storage-System/LFR20S-series.html

Learn more

LFR15S series

U_n : 250 VAC / 170 VDC

I_n : 10 ~ 100 A

I_1 : 100 kA @ 250 VAC / 50 kA @ 150 VDC

Utilization Category: aR & aBat

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-UL-Fuses/UL-Fuses-for-Energy-Storage-System/LFR15S-series.html

Short Circuit and Overload Protection

Mainly used to solve the safety hazard caused by short circuit or overload.

Applications

DC Charging Pile, Industrial Heaters, Welding Equipment,
Metal Processing Equipment, UPS

SETsafe | SETfuse Solution

SETsafe|SETfuse Fuses for EV Charging Facilities are high speed fuses which can be used to protect EV Charging Facilities. It has the charcteristics of low I^2t, high speed fusing, good current limiting ability and excellent breaking capacity. It can be used to solve the security risks caused by short circuit of EV Charging Facilities.

2.2

LV Fuses for EV Charging Infrastructure

U_n : 690 VAC
500 / 750 / 1000 VDC
I_n : (0.5 ~ 400) A
I_1 : 30 / 50 / 100 kA

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-LV-Fuses/LV-Fuses-for-EV-Charging.html

Learn more

LFR01-xxxA10-BB series

U_n : 1000 VDC
I_n : 50 ~ 400 A
I_1 : 100 kA @ 1250 VAC / 50 kA @ 1000 VDC
Utilization Category: aR & aBat
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-UL-Fuses/UL-Fuses-for-EV-Charging/LFR01-xxxA10-BB-series.html

Learn more

LFR000-xxxA10-BT series

U_n : 1000 VDC
I_n : 50 ~ 250 A
I_1 : 50 kA
Utilization Category: aR & aBat
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-UL-Fuses/UL-Fuses-for-EV-Charging/LFR000-xxxA10-BT-series.html

Learn more

LFR000-xxxA07-BT series

U_n : 750 VDC
I_n : 100 ~ 400 A
I_1 : 50 kA
Utilization Category: aR & aBat
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-UL-Fuses/UL-Fuses-for-EV-Charging/LFR000-xxxA07-BT-series.html

Learn more

LFR20MN series

U_n : 750 VDC
I_n : 32 ~ 200 A
I_1 : 50 kA
Utilization Category: aR & aBat
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-UL-Fuses/UL-Fuses-for-EV-Charging/LFR20MN-series.html

Learn more

LFR5A series

U_n : 500 VDC
I_n : 350 ~ 400 A
I_1 : 30 kA
Utilization Category: aR & aBat
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-UL-Fuses/UL-Fuses-for-EV-Charging/LFR5A-series.html

Learn more

LFR15-xxxA06-BT series

U_n : 690 VAC / 500 VDC
I_n : 32 ~ 100 A
I_1 : 100 kA @ 690 VAC / 50 kA @ 500 VDC
Utilization Category: aR
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-UL-Fuses/UL-Fuses-for-EV-Charging/LFR15-xxxA06-BT-series.html

Learn more

SCF632A & SCF632AP series

Body Materials: Ceramic
I_n : 15 ~ 30 A
U_n : 250 ~ 500) VAC / 250 ~ 600 VDC
Dimensions: Φ6.35 × 31.8 mm
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-UL-Fuses/UL-Fuses-for-EV-Charging/SCF632A-SCF632AP-series.html

Learn more

SCF632 & SCF632P series

Body Materials: Ceramic
I_n : 0.5 ~ 30 A
U_n : 250 ~ 600 VAC / VDC
Dimensions: Φ6.35 × 31.8 mm
Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-UL-Fuses/UL-Fuses-for-EV-Charging/SCF632-SCF632P-series.html

Short Circuit and Overload Protection

Mainly used to solve the safety hazard caused by short circuit or overload.

Applications

Photovoltaic Combiner Box, Inverter

SETsafe | SETfuse Solution

SETsafe|SETfuse Fuses for PV are high speed fuses which are specially designed to protect PV systems. It has the charcteristics of very low I2t, high speed fusing, excellent current limiting ability and breaking capacity. It can be used to solve the security risks caused by short circuit of PV systems.

2.3

LV Fuses for PV

U_n : 1500 VDC

I_n : 10 ~ 50 A

I_1 : 50 kA

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-LV-Fuses/LV-Fuses-for-PV-Photovoltaic-System.html

Short Circuit and Overload Protection

Mainly used to solve the safety hazard caused by short circuit or overload.

Applications

SPD Protection, TVSS Products

SETsafe | SETfuse Solution

The SETsafe / SETfuse Surge Suppression Fuses are designed for backup protection and guarantee the fuse will not open or snap when the nominal surge current of the SPD and will break the circuit before the over current destroying of the SPD.

2.4

LV Fuses for Surge Protection

U_n : 400 / 690 VAC

I_n : 25 kA

I_1 : 50 kA

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-LV-Fuses/LV-Fuses-for-Surge-Protector.html

Short Circuit and Overload Protection

Mainly used to solve the safety hazard caused by short circuit or overload.

Applications

Photovoltaic Combiner Box, Surge Protective Device (SPD)

2.5

LV Fuses – Fuse Holder

U_n : 400 / 690 VAC
1500 VDC
I_n : 50 A
I_1 : 50 kA

RoHS REACH

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-LV-Fuses/LV-Fuses-Fuse-Holder.html

CFH14R

U_n : 400 VAC / 690 VAC
I_1 : 50 kA

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-LV-Fuses/LV-Fuses-Fuse-Holder/CFH14R-series.html

CFH10PVL

U_n : 1500 VDC
I_n : 50 A
I_1 : 50 kA

Learn more:
https://setsafe.com/Products/Over-Current-Protection/Low-Voltage-Fuses-LV-Fuses/LV-Fuses-Fuse-Holder/CFH10PVL-series.html

Active Protection

Learn more:
https://setsafe.com/Products/Active-Protection.html

SETsafe | SETfuse Products

1. idea Thermal CutOff (iTCO)
2. Heat CutOff (HCO)
3. Pyro CutOff (PCO)
4. Mechanical CutOff (MCO)

Glossary

I_r	Rated Current
U_r	Rated Voltage
T_f	Rated Functioning Temp.

Excution System's Command to Disconnecct Fault Circuit

Disconnect the faulty circuit according to system instructions.

Applications

Battery Control Unit Failure Protection, High-Power Solid State Relay, PTC Heater

SETsafe | SETfuse Solution

The two electrodes are connected with the thermal element as electrical connections of passive temperature-sensing. At the same time, a Feed Heater (FH) with independent over-temperature protection is built-in to heat up the thermal element, providing sufficient heat to the fuse & cut off the electrical connection points.

1

idea Thermal CutOff (iTCO)

MC I_r : 20 ~ 270 A

MC U_r : 20 ~ 400 VDC

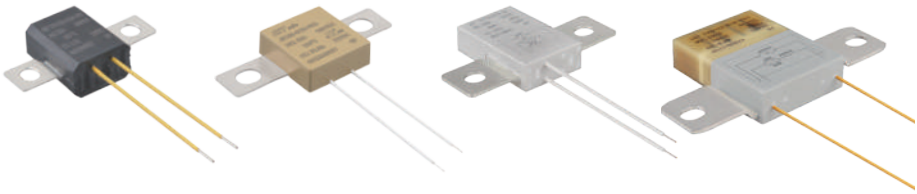
CC U_r : 12 ~ 96 VDC

RoHS REACH

Learn more:
https://setsafe.com/Products/Active-Protection/idea-Thermal-CutOff-iTCO.html

Rated Current

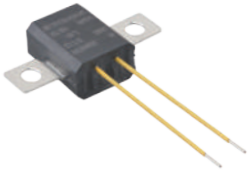
1	2	3	4
≤ 20 A	21 ~ 100 A	101 ~ 150 A	200 ~ 270 A



idea Thermal CutOff (iTCO)

1

Rated Current: ≤ 20 A



Learn more

TPH×××-R series

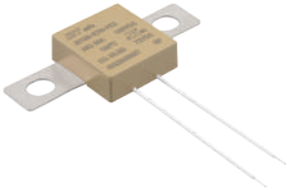
MC I_r : 20 A
MC U_r : 400 VDC
CC U_r : 12 / 24 / 36 / 48 VDC
T_f : 150 ℃

Learn more:
https://setsafe.com/Products/Active-Protection/idea-Thermal-CutOff-iTCO/TPHxxx-R-series.html

idea Thermal CutOff (iTCO)

2

Rated Current: 21 ~ 100 A



Learn more

JS×××-R series

MC I_r : 60 A
MC U_r : 150 VDC
CC U_r : 12 / 24 / 36 / 48 / 72 VDC
T_f : 150 ℃

MC I_r : 80 / 100 A
MC U_r : 100 VDC
CC U_r : 12 / 24 / 36 / 48 / 72 VDC
T_f : 150 ℃

Learn more:
https://setsafe.com/Products/Active-Protection/idea-Thermal-CutOff-iTCO/JSxxx-R-series.html

Learn more

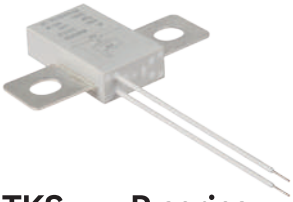
TRRxxx-R series

MC I_r : 100 A
MC U_r : 250 / 500 VDC
CC U_r : 24 / 48 VDC
T_f : 150 ℃

Learn more:
https://setsafe.com/Products/Active-Protection/idea-Thermal-CutOff-iTCO/TRRxxx-R-series.html

idea Thermal CutOff (iTCO)

3 Rated Current: 101 ~ 150 A



Learn more

TKSxxx-R series

MC I_r : 120 A
MC U_r : 125 VDC
CC U_r : 12 / 24 / 36 / 48 / 72 / 96 VDC
T_f : 150 ℃

Learn more:
https://setsafe.com/Products/Active-Protection/idea-Thermal-CutOff-iTCO/TKSxxx-R-series.html

Learn more

TKTxxx-R series

MC I_r : 150 A
MC U_r : 125 VDC
CC U_r : 12 / 24 / 36 / 48 / 72 / 96 VDC
T_f : 150 ℃

Learn more:
https://setsafe.com/Products/Active-Protection/idea-Thermal-CutOff-iTCO/TKTxxx-R-series.html

idea Thermal CutOff (iTCO)

4 Rated Current: 200 ~ 270 A

Learn more

THUxxx-R series

MC I_r : 200 / 270 A
MC U_r : 80 VDC
CC U_r : 12 / 24 / 36 / 48 / 72 VDC
T_f : 145 ℃

Learn more:
https://setsafe.com/Products/Active-Protection/idea-Thermal-CutOff-iTCO/THUxxx-R-series.html

Excution System's Command to Disconnecct Fault Circuit

Disconnect the faulty circuit according to system instructions.

Applications

Electric Tool, Storage Battery, Portable Power Supply, Electric Motorcycle, Electric Bicycle, Household Energy Storage

SETsafe | SETfuse Solution

Used for secondary protection of lithium battery protection circuit to reduce the risk of fire or explosion .

2

Heat Cutoff (HCO)

I_r : 30 / 45 A

U_r : 100 VDC

Operation Voltage: (4 ~ 92) VDC

RoHS REACH

Learn more:
https://setsafe.com/Products/Active-Protection/Heat-Cutoff-HCO.html

Rated Current

1 **30 A**

2 **45 A**

Active protection against circuit faults

Quickly cuts off power when collision, short circuit, overcurrent or other safety faults occur.

Applications

Energy Storage, Electric Vehicles, Non-road Electric Vehicles

SETsafe | SETfuse Solution

Can receive external trigger signal, trigger gas generator action, push the piston movement, quickly cut off the electrical connection point, and cut off the circuit connection.

3

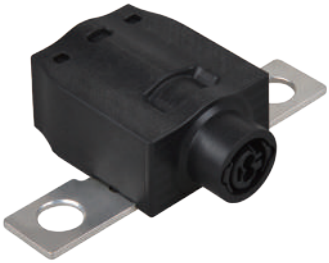
Pyro CutOff (PCO)

I_r : 250 / 400 A

U_r : 150 / 500 VDC

Generator Trigger Current: 1.75 A / 0.5 ms
or 1.20 A / 2.0 ms

Learn more:
https://setsafe.com/Products/Active-Protection/Pyro-CutOff-PCO.html



PHW series

Current Carrying Capacity: 250 A
Breaking Capacity: 150 V / 2.3 KA / 7 μH
Resistance (Ambient): Before Breaking ≤ 0.2 mΩ
After Breaking ≥ 100 MΩ / 1150 V
Generator Resistance: ≥ 1.7 Ω and ≤ 2.5 Ω
Generator Trigger Current: 1.75 A / 0.5 ms or
1.20 A / 2.0 ms
Generator Safety Current: ≤ 0.4 A
Generator Insulation Resistance 1 MΩ（500 VDC / 2 s)

Learn more:
https://setsafe.com/Products/Active-Protection/Pyro-CutOff-PCO/PHW-series.html

PRX series

Current Carrying Capacity: 400 A
Breaking Capacity: 500 V / 16 KA / 20 μH
Resistance (Ambient): Before Breaking ≤ 0.2 mΩ
After Breaking ≥ 100 MΩ / 1500 V
Generator Resistance: ≥ 1.7 Ω and ≤ 2.5 Ω
Generator Trigger Current: 1.75 A / 0.5 ms or
1 .20 A / 2.0 ms
Generator Safety Current: ≤ 0.4 A
Generator Insulation Resistance: 50 MΩ（500 VDC / 2 s)

Learn more:
https://setsafe.com/Products/Active-Protection/Pyro-CutOff-PCO/PRX-series.html

Active protection against circuit faults

Meet the secondary protection requirements of UL1973, IEC62619 Lithium battery pack.

Applications

Home Energy Storage, Non-road Electric Vehicles,
EV Thermal Managemen System

SETsafe | SETfuse Solution

Built-in heater that triggers a mechanical cutoff at the electrical connection point to cut off the circuit connection.

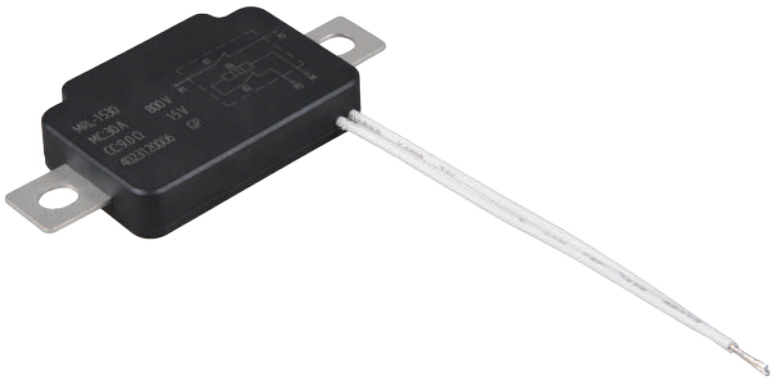
4

Mechanical CutOff (MCO)

MC I_r : 30 A	50 A
MC U_r : 800 VDC	500 VDC
CC U_r : 15 VDC	

RoHS REACH

Learn more:
https://setsafe.com/Products/Active-Protection/Mechanical-CutOff-MCO.html



Providing a Total Solution for High Standard Safety Circuit Protection

Websites

www.SETsafe.com
www.SETfuse.com

Products Category Links

Over Temperature Protection
https://setsafe.com/Products/Over-Temperature-Protection.html

Over Voltage Protection
https://setsafe.com/Products/Over-Voltage-Protection.html

Over Current Protection
https://setsafe.com/Products/Over-Current-Protection.html

Active Protection
https://setsafe.com/Products/Active-Protection.html

Product Catalog & Datasheet Download Link

https://setsafe.com/Support/Datasheet-Download.html

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