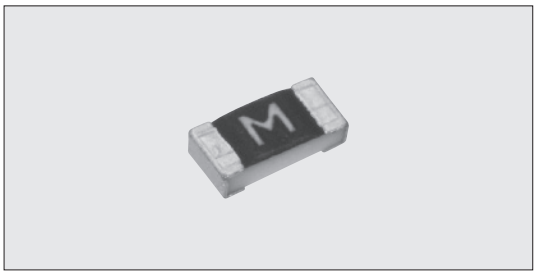
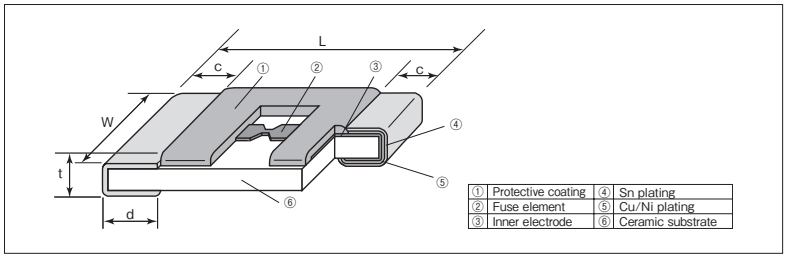
EU RoHS

TF16SN Chip Current Fuses



Coating color : Black

Construction



①	Protective coating	④	Sn plating
②	Fuse element	⑤	Cu/Ni plating
③	Inner electrode	⑥	Ceramic substrate

Features

- Small and light chip current fuses for the secondary circuit.
- The original manufacturing method makes the fusing characteristics stable.
- Able to reduce an occupied area.
- Low power consumption and less voltage dropping due to low internal resistance.
- Suitable for overcurrent protection of circuit block in small electronic devices.
- Suitable for both flow and reflow solderings.
- Products meet EU-RoHS requirements.

Approvals Awarded

UL248.14 File No. E131375
c－UL (CSA) C22.2 No. 248.14 File No. E131375

Applications

- Notebook personal computers
- HDDs
- Mobile phones
- Digital still cameras

Dimensions

Type (Inch Size Code)	Dimensions (mm)					Weight (g) (1000pcs)
	L	W	c	d	t	
TF16SN (0603)	1.6±0.2	0.8±0.1	0.3±0.1	0.3±0.1	$0.4^{+0.1}_{-0.05}$	2.15

Type Designation

Example

TF	16S	N	1.25	T	TD
Product Code	Size	Fusing Characteristics	Rated Current	Terminal Surface Material	Taping
	16S:1.6×0.8mm	N:Normal blow		T:Sn	TD:4mm pitch punch Paper BK:Bulk

Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS.
For further information on taping, please refer to APPENDIX C on the back pages.

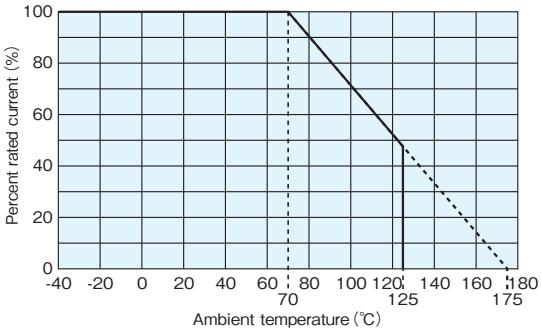
Ratings

Type	Marking	Rated Current	Fusing Time	Internal R. (mΩ) Max.	Rated Voltage	Rated Ambient Temp.	Operating Temperature Range	Taping & Q'ty/Reel (pcs)
								TD
TF16SN0.20	A	0.20A	Open within 1s at 200% rated current. Refer to the graph of fusing characteristics.	1500	32V	+70℃	−40～+125℃	5,000
TF16SN0.25	C	0.25A		960				
TF16SN0.315	D	0.315A		600				
TF16SN0.40	H	0.40A		440				
TF16SN0.50	F	0.50A		300				
TF16SN0.63	I	0.63A		190				
TF16SN0.70	J	0.70A		170				
TF16SN0.80	K	0.80A		135				
TF16SN1.00	L	1.00A		103				
TF16SN1.25	M	1.25A		78				
TF16SN1.60	N	1.60A		58				
TF16SN2.00	S	2.00A		47				
TF16SN2.50	T	2.50A		38				
TF16SN3.15	U	3.15A		28				

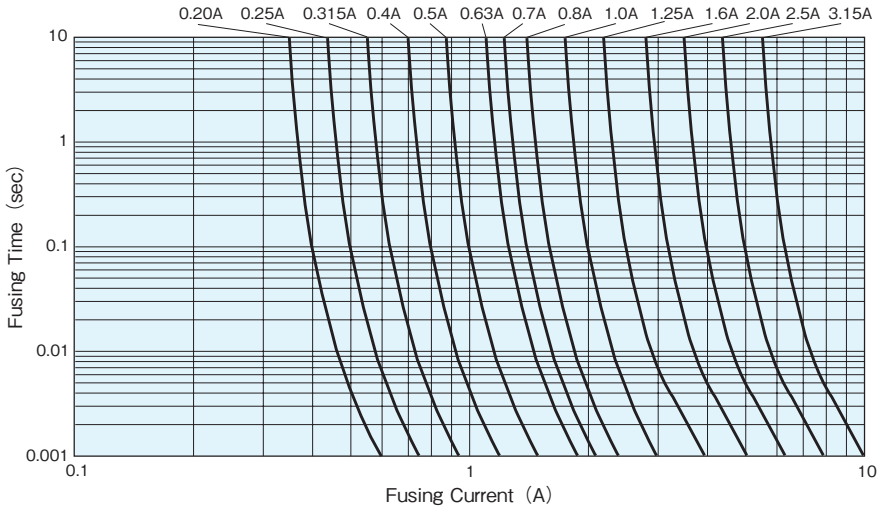
■Derating

- Stationary current
  Regard the peak of stationary current waveform as stationary current value when the stationary current is repeated pulse.
- Temperature Derating
  Rated current needs to be derated if used at an ambient temperature of 70℃ or higher. Refer to the derating coefficient on the right figure.

■Rated Current Derating



■Fusing Characteristics (Average Fusing Time)



■Performance

Test Items	Performance Requirements ΔR±%		Test Methods
	Limit	Typical	
Fusing characteristics	Within 1s	—	200% of rated current shall be carried. (at 25℃)
Bending test	No mechanical damages.	—	Distance between holding points 90mm, bending width 2mm, 1time.
Resistance to soldering heat	10	4.5	260℃±5℃, 10s±0.5s
Solderability	95% coverage min.	—	245℃±3℃, 3s±0.5s
Load life	10	4.5	70℃±2℃, 1000h, Rated current×100%, 1.5h ON/0.5h OFF cycle
Load life moisture	10	4.5	40℃±2℃, 90%～95%RH, 1000h, Rated current×100%, 1.5h ON/0.5h OFF cycle
Rapid change of temperature	10	4	−40℃ (30min) /+125℃ (30min) 10 cycles
Resistance to solvent	No evidence of damages to protective coating and marking.	—	Conforming to MIL-STD-202F
Residual resistance	10kΩ or more	—	Measure DC resistance after fusing

■Precautions for Use

- The substrate material of TF16SN applies ceramics to achieve good fusing characteristics. Keep the product free from excessive stress when it is to be mounted. Keep it also away from excessive thermal stress continuously. It may cause cracks. Please confirm on actual device before use.
- When you select fuse product, please make sure to confirm "Precautions for Use of Fusing Components" in this catalogue and ask KOA sales.