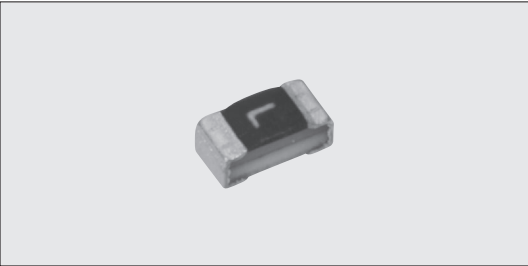


TF10BN

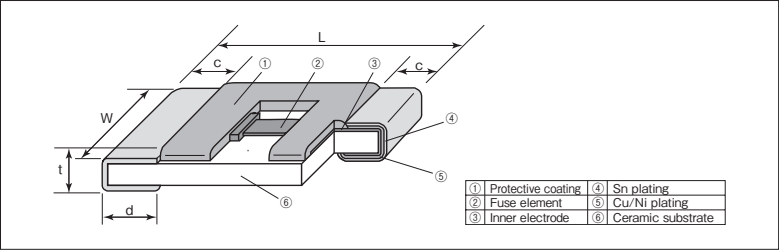
Chip Current Fuses

Chip Fuses



Coating color : Black

Construction



Features

- 1005 size miniature and light chip current fuses for the secondary circuit. An occupied area reducible.
- Excellent in mechanical strength.
- The original construction and manufacturing method make the fusing characteristics stable.
- Low power consumption and less voltage dropping possible due to low internal resistance.
- Suitable for over current protection of circuit block in small electronic devices.
- Suitable for both reflow and flow soldering.
- Products meet EU-RoHS requirements.

Approvals Awarded

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

Applications

- Cellular-telephones
- Digital still cameras
- Notebook personal computers

Ratings

Type	Marking	Rated Current	Fusing Time	Internal R. (mΩ) Max.	Rated Voltage	Rated Ambient Temp.	Operating Temperature Range	Taping & Q'ty/Reel (pcs)
								TB
TF10BN0.20	A	0.20A	Open within 5s at 200% rated current. Refer to the graph of fusing characteristics.	1990	DC 32V	+70℃	-55~+125℃	10,000
TF10BN0.25	C	0.25A		1270				
TF10BN0.315	D	0.315A		850				
TF10BN0.50	F	0.50A		320				
TF10BN0.63	I	0.63A		200				
TF10BN0.80	K	0.80A		135				
TF10BN1.00	L	1.00A		115				
TF10BN1.25	M	1.25A		90				
TF10BN1.60	N	1.60A		58				
TF10BN2.00	S	2.00A		42				
TF10BN2.50	T	2.50A		35				
TF10BN3.00	V	3.00A		30				
TF10BN3.50	R	3.50A		27				
TF10BN4.00	X	4.00A		23				
TF10BN5.00	Y	5.00A		19				

Dimensions

Type (Inch Size Code)	Dimensions (mm)					Weight (g) (1000pcs)
	L	W	c	d	t	
TF10BN (0402)	1.0±0.1	0.5±0.05	0.2±0.1	0.25±0.1	0.4±0.05	0.68

Type Designation

Example

TF	10B	N	1.00	T	TB
Product Code	Style	Fusing Characteristics	Rated Current	Terminal Surface Material	Taping
	10B:1.0×0.5mm	N:Normal blow		T:Sn	TB:2mm pitch press 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.

## Derating

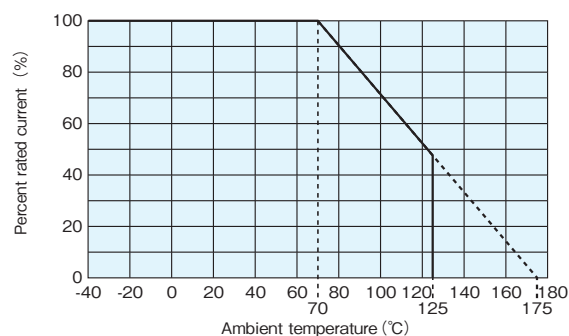
### • Stationary current

Regard the peak of stationary current waveform as stationary current value when the stationary current is repeated pulse.

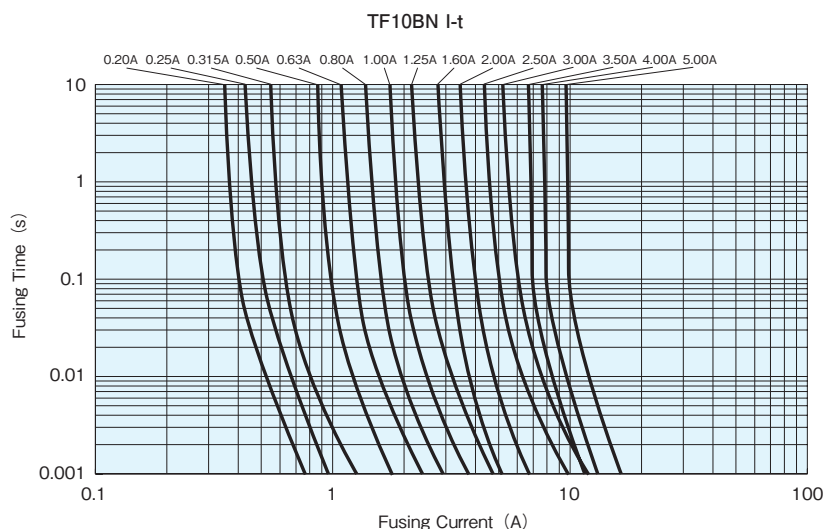
### • Temperature Derating

Rated current needs to be derated if used at an ambient temperature 70°C or higher. Refer to the derating coefficient on the right figure.

## Rated Current Derating



## Fusing Characteristics (Average Fusing Time)



## Performance

Test Items	Performance Requirements $\Delta R \pm \%$		Test Methods
	Limit	Typical	
Fusing characteristics	Within 5s	—	200% of rated current shall be carried. (at 25°C)
Bending test	No mechanical damages.	—	Distance between holding points 90mm, bending width 3mm, 1time
Resistance to soldering heat	10	5	260°C $\pm$ 3°C, 5s $\pm$ 0.5s
Solderability	95% coverage min.	—	245°C $\pm$ 3°C, 3s $\pm$ 0.5s
Load life	10	5	70°C $\pm$ 2°C, 1000h, Rated current $\times$ 100%, 1.5h ON/0.5h OFF cycle
Load life moisture	10	3	40°C $\pm$ 2°C, 90%~95%RH, 1000h, Rated current $\times$ 100%, 1.5h ON/0.5h OFF cycle
Rapid change of temperature	10	5	-55°C (30min) / +125°C (30min) 10 cycles
Resistance to solvent	No evidence of damages to protective.	—	Conforming to MIL-STD-202F
Residual resistance	10k $\Omega$ or more	—	Measure DC resistance after fusing

## Precautions for Use

- The substrate material of TF10BN applies ceramics to achieve good fusing characteristics. Please keep away from oxygen gas/liquid because such environment may deteriorate element strength and the performance by glass component corrosion.
- When you select fuse product, please make sure to confirm "Precautions for Use of Fusing Components" in this catalogue and ask KOA sales.