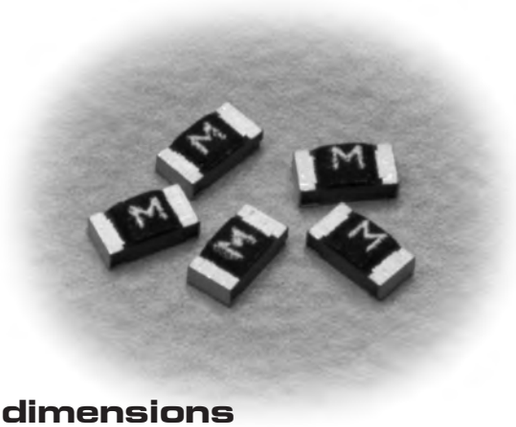
KOA SPEER ELECTRONICS, INC.

TF

thin film chip fuse

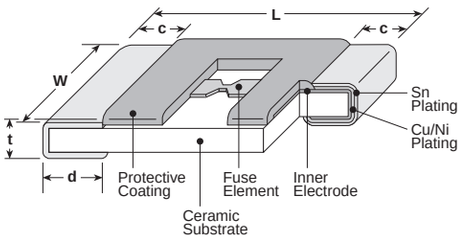
EU RoHS COMPLIANT



features

- Small, lightweight design
- Special manufacturing method stabilizing fusing characteristics and occupying less area
- Low power consumption and less voltage drop due to low internal resistance
- Suitable for overcurrent protection of circuit block in electronic devices
- Suitable for flow and reflow soldering
- Products with lead-free terminations meet EU RoHS and China RoHS requirements

dimensions and construction



Type (Inch Size Code)	Dimensions inches (mm) L	W	c	d	t
TF10BN (0402)	.04±.004 (1.0±0.1)	.02±.002 (0.5±0.05)	.008±.004 (0.2±0.1)	.01±.004 (0.25±0.1)	.015±.002 (0.4±0.05)
TF16AT (0603)	.063±.004 (1.6±0.1)	.031±.003 (0.8±0.08)	.012±.004 (0.3±0.1)	.012±.004 (0.3±0.1)	.018±.002 (0.45±0.05)
TF16SN (0603)	.063±.008 (1.6±0.2)	.031±.004 (0.8±0.1)	.012±.004 (0.3±0.1)	.012±.004 (0.3±0.1)	.015+ +.004 -.002 (0.4+ +0.1 -0.05)

ordering information

TF	16S	N	1.25	T	TE
Type	Size	Fusing Characteristic	Rated Current	Termination Material	Packaging
	10B: 1.0x0.5mm 16A: 1.6x0.8mm 16S: 1.6x0.8mm	N: Normal blow T: Anti pulse (16A only)	Reference rating chart	T: Sn	TB: 2mm pitch punched paper (TF10BN only, 10,000 pieces/reel) TD: 4mm pitch punched paper (TF16 only, 5,000 pieces/reel)

applications and ratings

Part Designation	Marking	Rated Current	Fusing Time	Internal R. Maximum (mΩ)	Rated Voltage	Rated Ambient Temperature	Operating Temperature Range
TF10BN0.20	A	0.20A	Open within 5 sec. at 200% rated current (Refer to Fusing Characteristics graph)	1990	32V	+70°C	-55°C to +125°C
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			
TF16AT0.25	C	0.25A	Open within 5 sec. at 200% rated current (Refer to Fusing Characteristics graph)	498	32V	+70°C	-55°C to +125°C
TF16AT0.315	D	0.315A		384			
TF16AT0.50	F	0.50A		198			
TF16AT0.63	I	0.63A		143			
TF16AT0.80	K	0.80A		120			
TF16AT1.00	L	1.00A		94			
TF16AT1.25	M	1.25A		73			
TF16AT1.60	N	1.60A		59			
TF16AT2.00	S	2.00A		42			
TF16AT2.50	T	2.50A		32			

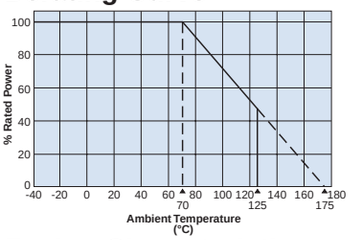
For further information on packaging, please refer to Appendix A.

applications and ratings (continued)

Part Designation	Marking	Rated Current	Fusing Time	Internal R. Maximum (mΩ)	Rated Voltage	Rated Ambient Temperature	Operating Temperature Range
TF16AT3.15	U	3.15A	Open within 5 sec. at 200% rated current (Refer to Fusing Characteristics graph)	24	32V	+70°C	-55°C to +125°C
TF16AT4.00	X	4.00A		17			
TF16AT5.00	Y	5.00A		14			
TF16SN0.20	A	0.20A	Open within 1 sec. at 200% rated current (Refer to Fusing Characteristics graph)	1500	32V	+70°C	-40°C to +125°C
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			

environmental applications

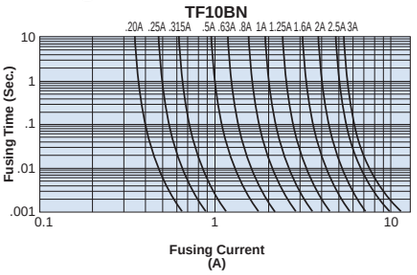
Derating Curve

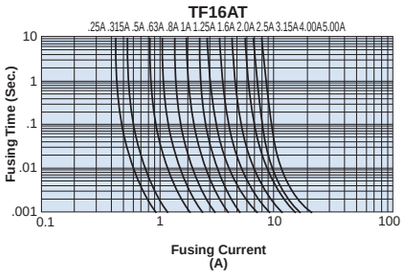


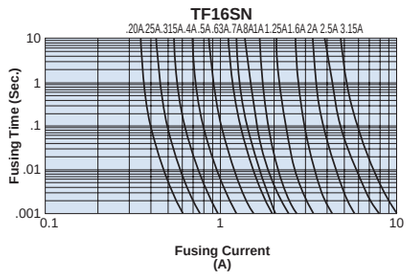
Stationary Current: Regard the peak of stationary current waveform as stationary current value when the stationary current is repeated pulse.

Temperature Derating: Rated current needs to be derated if used at an ambient temperature 70℃ or above. Refer to the derating coefficient on the left figure.

Fusing Characteristics







Performance Characteristics

Parameter	Requirement		Test Method
	Limit	Typical	
Fusing Characteristics	Within 1 second (16SN) Within 5 seconds (10BN, 16AT)	—	200% of rated voltage shall be carried (@25°C)
Bending Test	No mechanical damages	—	Distance between holding points: 90mm, Bending: 3mm, 1 time (BN, AT), 2mm, 1 time (SN)
Resistance to Solder Heat	±10%	±4.5% (16SN) ±5% (10BN, 16AT)	260°C ± 5°C, 10 seconds ± 0.5/4 second
Solderability	95% coverage minimum	—	245°C ± 3°C, 3 seconds ± 0.5 second
Load Life	±10%	±4.5%(16SN) ±5% (10BN, 16AT)	70°C ± 2°C, 1000 hours, rated current x 100%, 1.5 hr ON, 0.5 hr OFF cycle
Load Life Moisture	±10%	±3% (10BN) ±4.5% (16SN), 5% (16AT)	40°C ± 2°C, 90 - 95% RH, 1000 hours, rated current x 100% (10BN, 16SN), x 75% (16AT), 1.5 hr ON, 0.5 hr OFF cycle
Rapid Change of Temperature	±10%	±4% (16SN) ±5% (10BN, 16AT)	16SN: -40°C ± 2°C (30 minutes), 10BN, 16AT: -55°C ± 2°C, +125°C (30 minutes), 10 cycles
Resistance to Solvent	No evidence of damages to protective coating and marking	—	Conforming to MIL-STD-202F
Residual Resistance	10kΩ and more	—	Measure DC resistance after fusing

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Surface Mount Fuses ***category:***

Click to view products by KOA Speer ***manufacturer:***

Other Similar products are found below :

FHC20402ADTP FT600-0500-2 NFVC6125S0R50TRF SFT-125MA TF16SN2.00TTD 41921000000 TR/3216LR-500MA CCP2B20TTE TR-3216FF4-R SST 1-1K SST 5 -1K SST 2-1K TR2-TCP500-R F60C500V12AS FCC16501ABTP FCC16102ABTP FHC16322ADTP 0308.250UR 0308.375UR 0308.500UR 0308.750UR 0308001.UR 030801.5UR FCC16202ABTP 3-122-714 3-122-720 3-122-718 3-122-712 3-122-716 03081.25UR CQ06LF 5A 32V CQ06LT 5A 32V SET 2A 125V (G) SET 1A 125V (G) SEF 10A 125V (G) SEF 3A 125V (G) SEF 4A 125V (G) SEF 6A 125V (G) SEF 7A 125V (G) SET 4A 125V (G) SET 3A 125V (G) SET 5A 125V (G) SET 7A 125V (G) F0603G0R03FNTR SKY87604-12 SKY87604-11 SKY87604-13 0154002.DRL 0154008.DRL 0154.125DRL