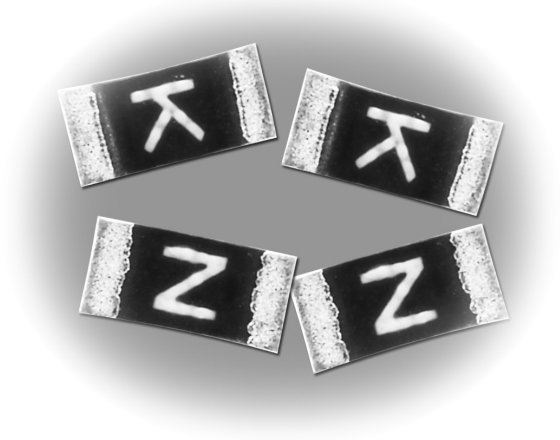
KOA SPEER ELECTRONICS, INC.

TF16VN

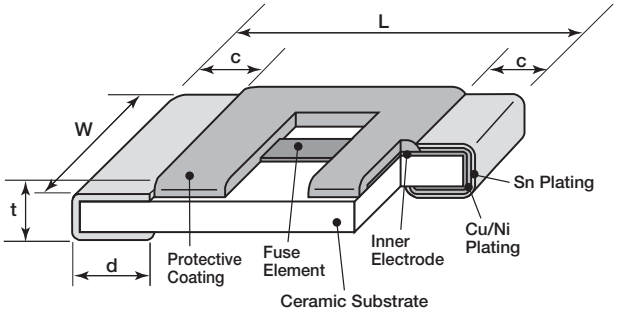
chip current fuses for automotive



features

- Small and light chip current fuses for the secondary circuit
- Temperature cycle (-55°C ~ 125°C), 1000 cycle
- Original construction and manufacturing method stabilize fusing characteristics
- Suitable for overcurrent protection of circuit block in small electronic devices
- Suitable for reflow solderings
- Products meet EU RoHS requirements
- AEC-Q200 Qualified

dimensions and construction



Type	Dimensions inches *(mm)*				
	L	W	c	d	t
TF16VN (0603)	.063±.004 *(1.6±0.1)*	.031±.004 *(0.8±0.1)*	.014±.004 *(0.35±0.1)*	.012±.004 *(0.3±0.1)*	.020±.002 *(0.5±0.05)*

ordering information

TF	16V	N	2.50	T	TD
Product Code	Size	Fusing Characteristics	Rated Current	Terminal Surface Material	Taping
	16V: 1.6 x 0.8mm	N: Normal blow		T: Sn	TD: 4mm pitch punch paper BK: Bulk

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

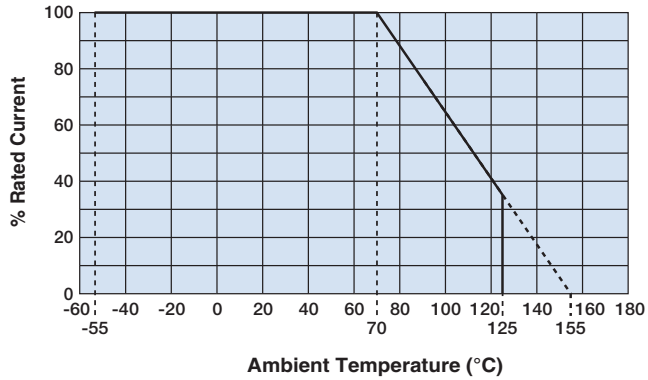
ratings

Type	Marking	Rated Current	Fusing Time	Internal R. (mΩ)Max.	Rated Voltage	Rated Ambient Temp.	Operating Temperature Range	Taping & Q'ty/Reel (pcs)
								TD
TF16VN0.80	K	0.80A	Open within 5 sec. at 250% rated current. Refer to the graph of fusing characteristics.	200	32V	+70°C	–55°C ~ 125°C	5,000
TF16VN1.00	L	1.00A		160				
TF16VN1.25	M	1.25A		130				
TF16VN1.60	N	1.60A		100				
TF16VN2.00	S	2.00A		80				
TF16VN2.50	T	2.50A		60				
TF16VN3.15	U	3.15A		40				

circuit protection

environmental applications

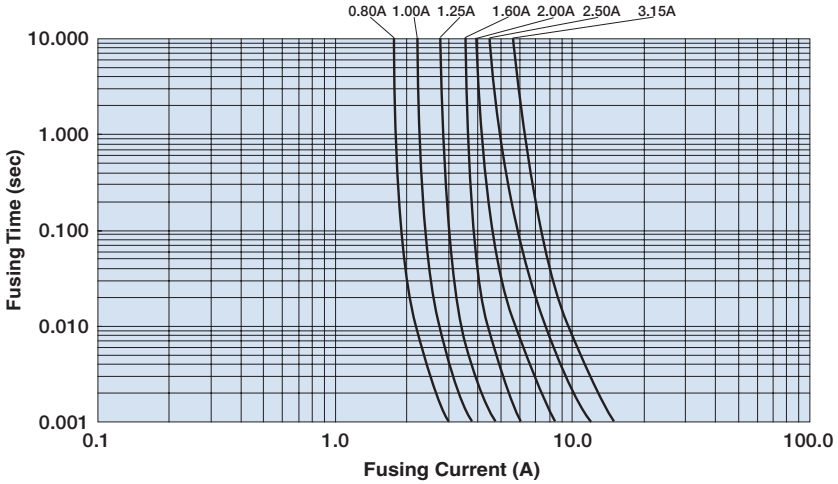
Derating Curve



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 of 70°C or more. Refer to the derating coefficient on the left figure.

Fusing Characteristics (Average Fusing Time)



Performance Characteristics

Test Items	Performance Requirements ΔR±%		Test Methods
	Limit	Typical	
Fusing Characteristics	Within 5 seconds	—	250% of rated current shall be carried (@25°C)
Bending Test	No mechanical damages	—	Distance between holding points 90mm, bending width 2mm, 1 time.
Resistance to Soldering Heat (Reflow Soldering)	10	5	Preheating: 150+30°C, 90 ± 30 seconds Heating: 230°C or more, 30 ± 10 seconds, max. 260°C
Solderability	95% coverage min.	—	245°C±3°C, 3 seconds ± 0.5 seconds
Load Life	10	5	70°C±2°C, 1000h, Rated current × 100%, 1.5h ON/0.5h OFF cycle
Load Life Moisture	10	5	85°C±2°C, 85%±5%RH, 1000h, Rated current × 10%, 1.5h ON/0.5h OFF cycle
Rapid Change of Temperature	10	5	-55°C (30min.)/+125°C (30min.) 1000 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