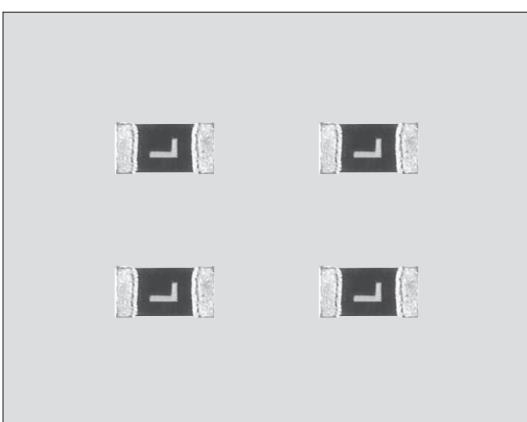


TF10BN 片式保险丝  
Chip Current Fuses

外观颜色：黑色 Coating color : Black

## ■ 特点 Features

- 是1005规格的超小型、轻量的二次电路用片状电流保险丝。可以把占有面积缩小。
- 机械强度优异。
- 根据独家的结构、制作方法，熔断特性稳定。
- 内部电阻值低，电压降低，可以减少功率消耗。
- 适用于小型电子设备的电路组件的过电流保护。
- 对应回流焊接。
- 符合欧盟RoHS。
- 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 reflow soldering.
- Products meet EU-RoHS requirements.

## ■ 取得规格 Approvals Awarded

UL248.14 认定文件号 File No. E131375

c-UL (CSA) C22.2 No.248.14

认定文件号 File No. E131375

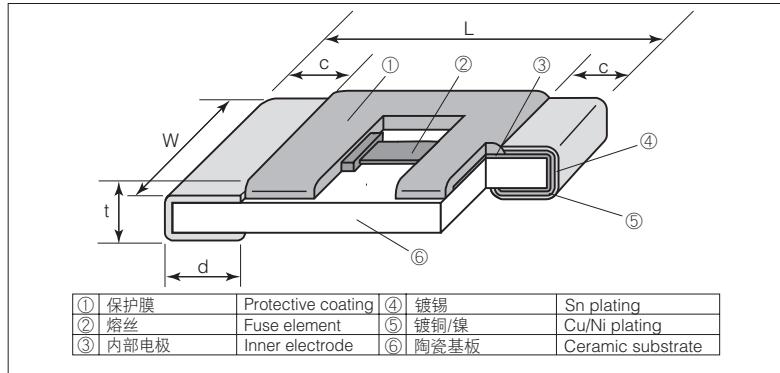
## ■ 用途 Applications

- 手机 Cellular-telephones
- 数码相机 Digital still cameras
- 笔记本电脑 Notebook personal computers

## ■ 额定值 Ratings

型号 Type	表示 Marking	额定电流 Rated Current	熔断时间 Fusing Time	内部电阻值 Internal R. (mΩ) Max.	额定电压 Rated Voltage	额定环境温度 Rated Ambient Temp.	使用温度范围 Operating Temperature Range	编带和包装数/卷 Taping & Q'ty/Reel (pcs)	
								TB	
TF10BN0.20	A	0.20A	施加额定电流的200%的电流时，在5秒钟以内参照熔断特性图。Open within 5 s. at 200% rated current. Refer to the graph of fusing characteristics.	1990	24V	+70°C	-55~+125°C	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					

## ■ 结构图 Construction



外观颜色：黑色 Coating color : Black

## ■ 特点 Features

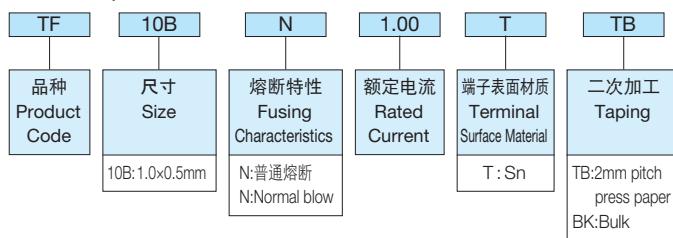
- 是1005规格的超小型、轻量的二次电路用片状电流保险丝。可以把占有面积缩小。
- 机械强度优异。
- 根据独家的结构、制作方法，熔断特性稳定。
- 内部电阻值低，电压降低，可以减少功率消耗。
- 适用于小型电子设备的电路组件的过电流保护。
- 对应回流焊接。
- 符合欧盟RoHS。
- 1005 size miniature and light chip current fuses for the secondary circuit. An occupied area reducible.
- Excellent in mechanical strength.
- The original 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 reflow soldering.
- Products meet EU-RoHS requirements.

## ■ 外形尺寸 Dimensions

型号 Type (Inch Size Code)	尺寸 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

## ■ 品名构成 Type Designation

## 实例 Example



欲知关于此产品含有的环境负荷物质详情（除EU-RoHS以外），请与我们联系。

编带细节请参考卷末附录C。

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.

## ■ 取得规格 Approvals Awarded

UL248.14 认定文件号 File No. E131375

c-UL (CSA) C22.2 No.248.14

认定文件号 File No. E131375

## ■ 用途 Applications

- 手机 Cellular-telephones
- 数码相机 Digital still cameras
- 笔记本电脑 Notebook personal computers

## ■ 额定值 Ratings

型号 Type	表示 Marking	额定电流 Rated Current	熔断时间 Fusing Time	内部电阻值 Internal R. (mΩ) Max.	额定电压 Rated Voltage	额定环境温度 Rated Ambient Temp.	使用温度范围 Operating Temperature Range	编带和包装数/卷 Taping & Q'ty/Reel (pcs)	
								TB	
TF10BN0.20	A	0.20A	施加额定电流的200%的电流时，在5秒钟以内参照熔断特性图。Open within 5 s. at 200% rated current. Refer to the graph of fusing characteristics.	1990	24V	+70°C	-55~+125°C	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					

## ■ 降低额定值 Derating

### ● 稳恒电流

稳恒电流在重复脉冲时，稳恒电流波形的峰值是恒稳电流值。

### ● 降低温度

在环境温度70°C以上使用时，需要校正温度，请参考右图的降低系数。

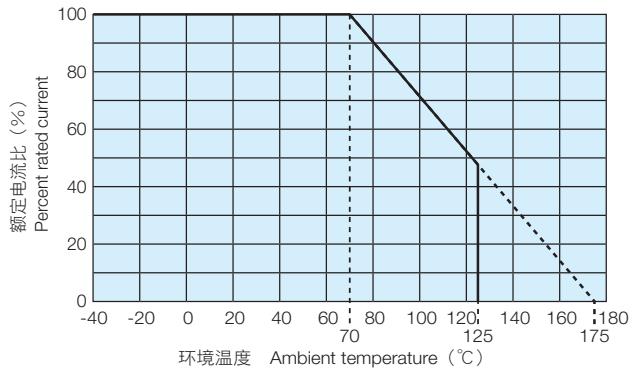
### ● Stationary current

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

### ● Temperature Derating

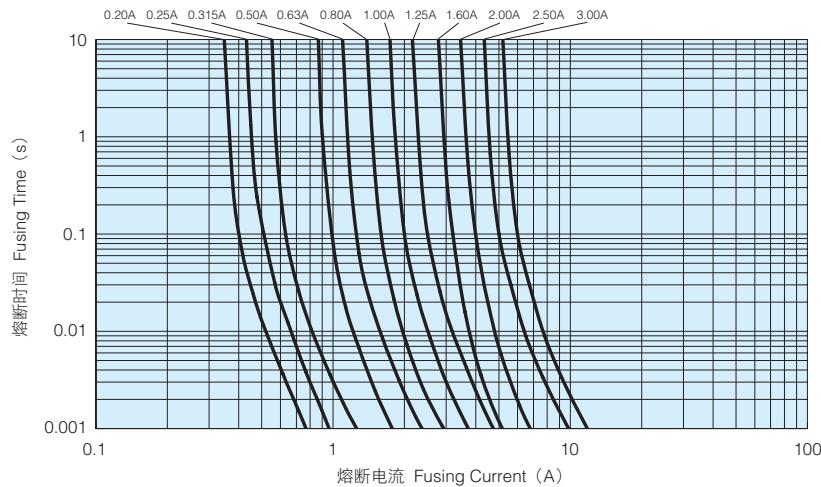
Rated current needs to be derated if used at an ambient temperature of 70°C or more. Refer to the derating coefficient on the right figure.

## ■ 根据环境温度减轻额定电流 Rated Current Derating



## ■ 熔断特性 Fusing Characteristics (标准熔断时间 Average Fusing Time)

TF10BN I-t 特性



## ■ 性能 Performance

试验项目 Test Items	标准值 Performance Requirements $\Delta R \pm \%$		试验方法 Test Methods
	保证值 Limit	代表值 Typical	
熔断特性 Fusing characteristics	5秒以内 Within 5s.	-	施加额定电流的200%的电流。 200% of rated current shall be carried.
电极强度 Bending test	应当没有电极剥离、导通断线等异常。 No mechanical damages.	-	支持点间隔90mm。弯曲宽度3mm, 一次。 Distance between holding points 90mm, bending width 3mm, 1time
耐焊接热 Resistance to soldering heat	10	5	260°C ± 3°C, 5s ± 1s
焊接性 Solderability	95%以上为新的焊接覆盖。 95% coverage min.	-	245°C ± 3°C, 3s ± 0.5s
通电寿命 Load life	10	5	70°C ± 2°C, 1000h, 额定电流 × 100%, 1.5小时ON/0.5小时OFF的周期。 Rated current × 100%, 1.5h ON/0.5h OFF cycle
耐湿通电寿命 Load life moisture	10	3	40°C ± 2°C, 90%~95%RH, 1000小时, 额定电流 × 100%, 1.5小时ON/0.5小时OFF的周期。 Rated current × 100%, 1.5h ON/0.5h OFF cycle
温度突变 Rapid change of temperature	10	5	-55°C (30min) / +125°C (30min.) 10 cycles
耐溶剂性 Resistance to solvent	外观应无消失等异常。 No evidence of damages to protective.	-	依据MIL-STD-202F Conforming to MIL-STD-202F
残留电阻值 Residual resistance	10kΩ以上 10kΩ or more	-	熔断后的直流电阻值。 Measure DC resistance after fusing

## ■ 使用上的注意

- 本产品的基材，为了得到保险丝特性，使用了特殊的陶瓷。请避免在氧化气体/液体环境下使用，因为玻璃成分的侵蚀会使材料强度降低，有特性退化的危险，请注意。
- 选定保险丝时，请与本目录内的「保险丝的使用注意事项」一起确认。
- 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.