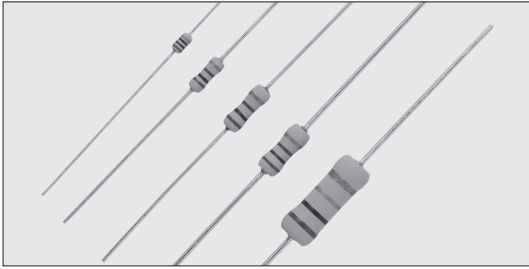


## RF Coat-insulated Fusing Resistors



Coating color : Blue  
Marking : Color code

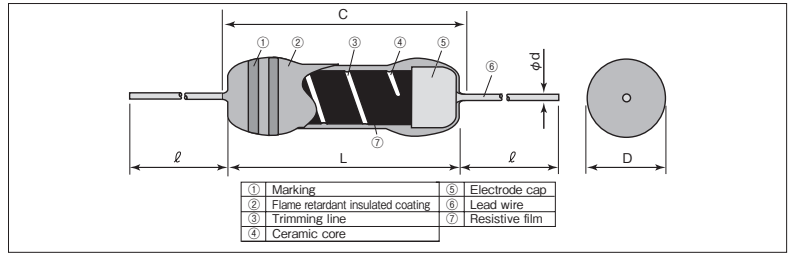
### Features

- Function as a resistor in normal condition.
- Quick fusing protects circuit from excessive overload at an abnormal time.
- Flame retardant coating. (Equivalent to UL94 V-0.)
- EU-RoHS regulation is not intended for Pb-glass contained in insulation coating.

### Reference Standards

IEC 60115-1  
JIS C 5201-1  
EIAJ RC-2125

### Construction



### Dimensions

Type	Dimensions (mm)					Weight (g) (1000pcs)
	L	C Max.	D	d (Nominal)	ℓ <sup>*1</sup>	
RF16	3.2±0.2	3.4	1.7 <sup>+0.25</sup> <sub>-0</sub>	0.45	30±3	120
RF25	6.3±0.5	7.1	2.3±0.3	0.6		230
RF50	8.5±0.5	9.5	3.0±0.3	0.6		290
RF1	9.0±1.0	11.1	3.5±0.5	0.8		460
RF2	15.5±1.0	18.0	6.0±1.0	0.8		1410

\*1 Lead length changes depending on taping and forming type.

### Type Designation

Example

RF	25	C	T52	A	100	J
Product Code	Power Rating	Terminal Surface Material	Taping & Forming	Packaging	Nominal Resistance	Resistance Tolerance
	16 : 0.17W 25 : 0.25W 50 : 0.5W 1 : 1W 2 : 2W	C : SnCu	See table below	A : AMMO R : REEL Nil : BOX	3 digits	J : ±5%

Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS.

For further information on taping and forming, please refer to APPENDIX C on the back pages.

### Taping & Forming Matrix

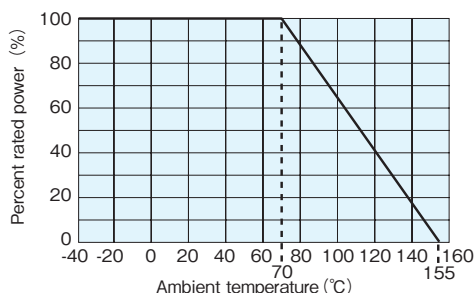
Type	Axial Taping				Radial Taping					L Forming					M Forming			
	T26	T52	T521	T631	MHT	VTP	VTE	VT	GT	L10A	L12.5A	L15A	L20A	L25A	M5	M10	M12.5	M15
RF16	○	○	—	—	○	—	—	—	—	—	—	—	—	—	M5F	—	—	—
RF25	○	○	—	—	—	○	○	○	—	○	—	—	—	—	—	M10X	—	—
RF50	—	○	—	—	—	—	—	—	○	—	○	○	—	—	—	—	M12.5E	—
RF1	—	○	—	—	—	—	—	—	○	—	○	○	○	—	—	—	—	M15F
RF2	—	—	○	○	—	—	—	—	○	—	—	—	○	—	—	—	—	—

### Ratings

Type	Power Rating	Resistance Range (Ω) (E24) J : ±5%	Fusing Characteristics							T.C.R. (×10 <sup>-6</sup> /K)	Dielectric Withstanding Voltage	Taping & Q'ty/AMMO (pcs)		
			Fusing Power						Fusing Time			T26A	T52A	T521A
			10W	7.5W	6.25W	3W	2.5W	3W						
RF16	0.17W	1.0~1k	—	—	—	3W 1Ω~4.7Ω	2.5W 5.1Ω~1kΩ	—	60sec Max.	±1000 : R≤4.7Ω ±350 : R≥5.1Ω	250V	2,000	2,000	—
RF25	0.25W	0.1~10k	10W 0.1Ω~0.18Ω	7.5W 0.2Ω~0.43Ω	6.25W 0.47Ω~0.91Ω	—	3.75W 1Ω~4.7Ω 2.4kΩ~10kΩ	3W 5.1Ω~2.2kΩ	30sec Max.			2,000	2,000	—
RF50	0.5W	0.1~15k	—	—	12.5W 0.1Ω~0.43Ω	—	7.5W 0.47Ω~2Ω 1.1kΩ~15kΩ	6W 2.2Ω~1kΩ			300V	—	2,000	—
RF1	1W	0.1~10k	—	30W 0.1Ω~0.18Ω	25W 0.2Ω~0.43Ω	—	15W 0.47Ω~2Ω 1.1kΩ~10kΩ	12W 2.2Ω~1kΩ			350V	—	2,000	—
RF2	2W	1.0~3k	—	—	—	36W 1Ω~3.6Ω	30W 1.1kΩ~3kΩ	24W 3.9Ω~1kΩ	600V		—	—	500	

Rated Ambient Temperature : +70°C  
Operating Temperature Range : -40°C ~ +155°C  
Rated voltage = √(Power Rating × Resistance value)

## Derating Curve

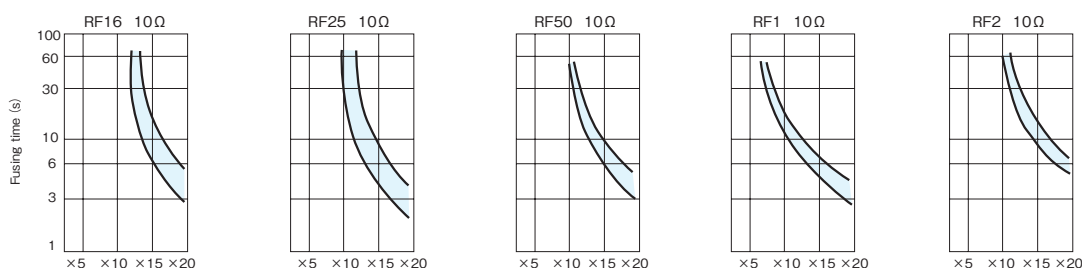


For resistors operated at an ambient temperature of 70°C or higher, the power shall be derated in accordance with the above derating curve.

## Characteristics

Test Items	Performance Requirements $\Delta R \pm$ (%+0.05 $\Omega$ )		Test Methods
	Limit	Typical	
Resistance	Within specified tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	+25°C/+125°C
Overload (Short time)	1	0.5	Rated voltage $\times$ 2.5 for 5s
Resistance to soldering heat	1	0.5	350°C $\pm$ 10°C, 3.5s $\pm$ 0.5s or 260°C $\pm$ 5°C, 10s $\pm$ 1s
Rapid change of temperature	1	0.5	-40°C(30min.)/+85°C(30min.) 5 cycles
Moisture resistance	5	2.5	40°C $\pm$ 2°C, 90%~95%RH, 1000h 1.5h ON/0.5h OFF cycle
Endurance at 70°C	5	2.5	70°C $\pm$ 2°C, 1000h 1.5h ON/0.5h OFF cycle
Resistance to solvent	No abnormality in appearance. Marking shall be easily legible.	—	The resistor shall be immersed in IPA for 30s.
Flame retardant	No evidence of flaming or self-flaming.	—	Flame test : The test flame shall be applied and removed for each 15 sec respectively to repeat the cycle 5 times. Overload flame retardant: AC Voltage corresponding to 2, 4, 8, 16 and 32 times the power rating shall be applied for each 1min. until disconnection occurs.

## Example of Fusing Characteristics



Magnification of power rating

## Precautions for Use

- Be careful to handle these resistors because outer coatings are comparatively weak to outer shock due to flameproof special coats. Please wash them to a minimum. No external force is given to the coating films until they are well dried because the coating films become weaker right after washing. The original strength will be returned after they are dried, so please pay attention not to apply any external force onto the coating film of resistors for 20 minutes after drying. Especially no PC boards shall be piled up.
- Maximum open-circuit voltage is the maximum value of the voltage applicable to both ends of resistors, when a fuse resistor becomes open conditions in a circuit. It differs according to the form of a product and a resistance value and is specified individually. The maximum open-circuit voltage is the lower one, whichever the voltage 1000 times of the power rating or the voltage shown in below table. Use the components under the voltage applied between the terminals of resistors to be under the maximum open-circuit voltage regardless of normal operating or abnormal operating time of equipment.

Rated Power	0.17W	0.25W	0.5W	1W	2W
Maximum Open-Circuit Voltage	100V	200V	250V	300V	300V