

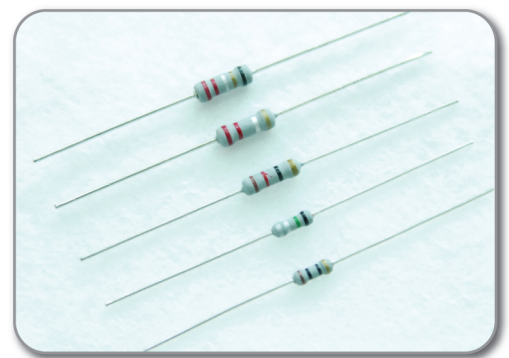
FR series

Fusible Resistors

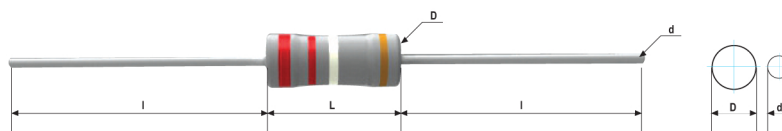
Fusible Resistors are plated with Nickel Film on ceramic rod and then is coated with silicon paint. It provide an excellent fusing characteristic for circuit protection in case of overload or component failure.

Feature

- Circuit protection in case of overload or component failure
- Opening the circuit safety without burning and flaming at a emergency overload due to make use of flame proof coating
- Miniature size (FRS 1/2W, 1W, 2W, 3W) (FRSS 1W) result in 50% space saving
- Coating Color : Silicon
- FR (Standard) : Gray (FR 1/4W, 1/2W, 1W, 2W)
- FRS (Mini) : Gray (FRSS 1W, FRS 1W) Green (FRS 1/2W, 1W, 2W, 3W)
- Making : Color Coding
 - 4 Color (FR 1/4W, 1/2W, FRSS 1W)
 - 5 Color (FR 1W, 2W, FRS 1W, 2W, 3W)
 - Fifth Color (White) FRS 1W (Black)
- Available Type: TC, TB, TR, TT, MB (please refer to 'Reference 1. Type')



Description



Dimension

Type	Dimension (mm)			
	L	D	l	d
FR 1/4W	6.0±0.2	2.4±0.2	26±1.0	0.58±0.05
FRS 1/2W	6.0±0.2	2.4±0.2	26±1.0	0.58±0.05
FR 1/2W	9.0±1.0	3.5±0.5	25±1.0	0.70±0.05
FRS 1W	9.0±1.0	3.5±0.5	25±1.0	0.70±0.05
FRSS 1W	6.0±0.2	2.4±0.2	26±1.0	0.58±0.05
FR 1W	11.0±1.0	4.0±0.5	30±1.0	0.70±0.05
FRS 2W	11.0±1.0	4.0±0.5	30±1.0	0.70±0.05
FR 2W	15.0±1.0	5.5±0.5	30±1.0	0.80±0.05
FRS 3W	15.0±1.0	5.5±0.5	30±1.0	0.80±0.05

*Specifications given herein are changeable under to discuss with user and maybe changed at anytime without prior notice.

Rating

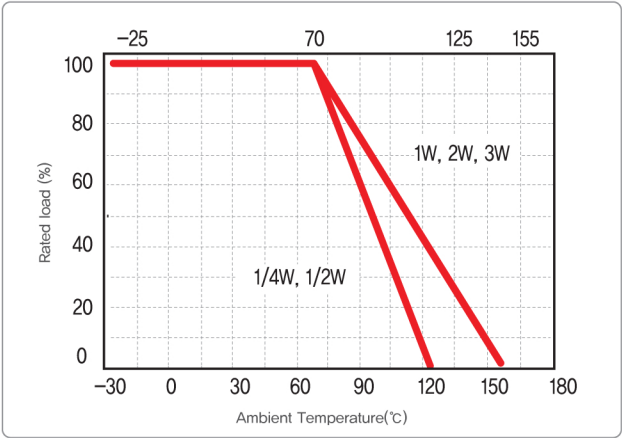
Type	Power Rating(W)	Max Working-Voltage(V)	Max Overload Voltage(V)	Dielectric Withstanding Voltage(V)	Operating Temp.[°C]	Resistance Range(Ω)	Resistance Tolerance (%)
FR 1/4W	1/4	250	500	500	-25 ~ +155	0.1 ~ 100	F (±1%) G (±2%) J (±5%) K (±10%) L (±15%)
FRS 1/2W	1/2	250	600	600			
FR 1/2W	1/2	250	600	600			
FRS 1W	1	300	600	600			
FRSS 1W	1	300	600	600			
FR 1W	1	300	600	600			
FRS 2W	2	300	600	600			
FR 2W	2	300	600	600			
FRS 3W	3	300	600	600			

※ Other than those listed above resistance tolerance is ever set in consultation with the user side.

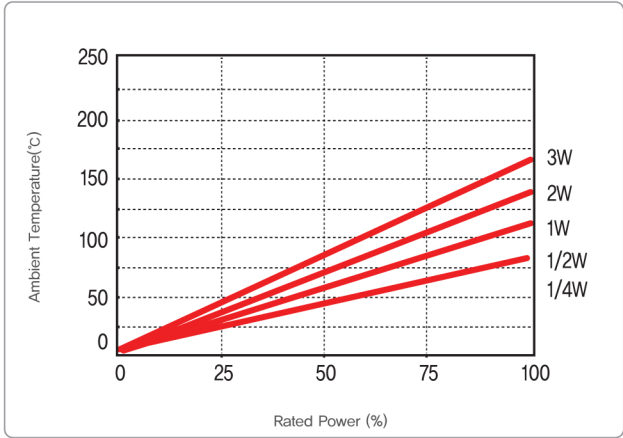
Performance

Test Items	Performance Requirements	Test Methods
Resistance	With specified tolerance	Measure resistance at 25°C
Short Time Over Load	With specified value	+25°C / +125°C
Temperature Coefficient Resistance	±350PPM/°C	Rated voltage x 2.5 for 5sec Max overload voltage
Resistance Against Soldering Test	±1%	260±3°C, 2~2.5mm,5±1sec measure resistance After 1hr at room temp
Load Life in Temperature	±5%	40±2°C, 90~95% RH, 1.5hr ON/0.5hr OFF, 120hr
Load Life in Moisture	±5%	70±2°C, 1.5hr ON/0.5hr OFF, 120hr
Fusable Test	Fusing Time : 1~30Sec within Resistance value must be opened, Resistance which after the test, exceed 100 times of initial resistance.	Check fusing time(seconds) and resistance - less than 1Ω : Rated Voltage*5 time - more than 1Ω : Rated Voltage*4 time

Derating Curve



Surface Temperature Rise



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