Features:

- Automatically insertable
- High quality performance
- Flame retardant type available
- Cost effective and commonly used
- Availability of very low or very high ohmic value can be supplied on a case to case basis

Explanation of Part Numbers:

R	25	G	103	J	T	XX
1	2		3	4	5	6

1 Style:

R = Carbon Film Fixed Resistors

2 Wattage:

08 = 1/8 watt	25 = 1/4 watt	50 = 1/2 watt
100 = 1 watt	200 = 2 watt	300S = 3 watt

3 Nominal Resistance Value:

E24 Series (5% Tolerance)
The first two digits are significant figures of resistance and the third digit denotes the number of zeros (decimal point is expressed by the letter "R").
i.e. 102 = 1k Ω
1R2 = 1.2 Ω

4 Tolerance:

J = ± 5% G = ± 2%

5 Packaging:

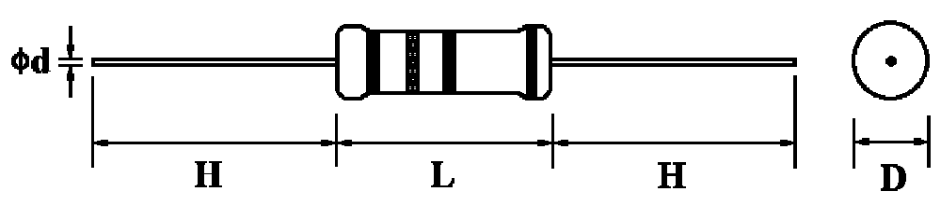
T = Tape & Reel	B = Bulk
TB = Tape & Box	A = Ammo

6 Lead Forming:

PN = Panasert Type	PA1 = Avisert Type 1
PA2 = Avisert Type 2	PA3 = Avisert Type 3

* For all other requests, please consult factory

Dimensions:



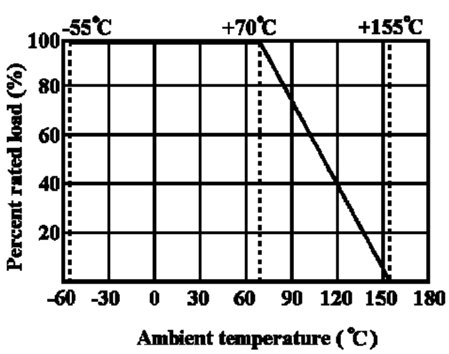
Normal Size					
Style	Power Rating at 70°C	Dimension (mm)			
		D Max.	L Max.	ød +0.02 -0.05	H±3
R08	1/8W (0.125W)	1.85	3.5	0.5	28
R25	1/4W (0.25W)	2.5	6.8	0.6	28
R50	1/2W (0.5W)	3.5	10.0	0.6	28
R100	1W	5.5	16.0	0.8	28
R200	2W	6.5	17.5	0.8	28

Small Size					
Style	Power Rating at 70°C	Dimension (mm)			
		D Max.	L Max.	ød +0.02 -0.05	H±3
R25S	1/4W (0.25W)	1.85	3.5	0.5	28
R50S	1/2W (0.5W)	3.0	9.0	0.6	28
R50SS	1/2W (0.5W)	2.5	6.8	0.6	28
R100SS	1W	5.0	12.0	0.7	28
R200S	2W	5.5	16.0	0.8	28
R300S	3W	6.5	17.5	0.8	28

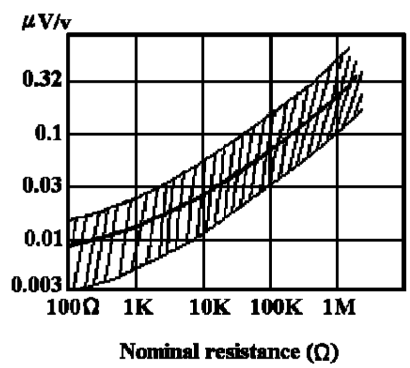
Rating

Style	Max. Working Voltage	Max. Overload Voltage	Dielectric Withstanding Voltage	Resistance Range
R08 R25S	200V	400V	400V	.22Ω-22MΩ
R25	250V	500V	500V	.22Ω-22MΩ
R50SS	250V	500V	250V	1Ω-10MΩ
R50 R50S	350V	700V	700V	.47Ω-22MΩ
R100 R100S R100SS	500V	1000V	1000V	.1Ω-10MΩ
R200 R200S R300S	500V	1000V	1000V	.62Ω-10MΩ

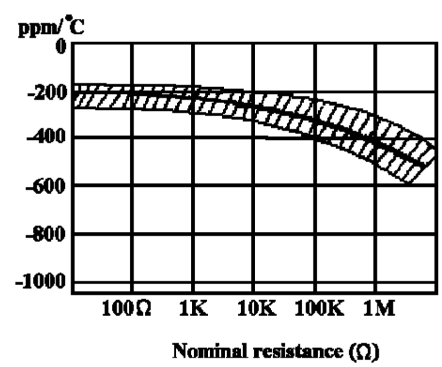
Derating Curve



Current Noise



Temp. Coefficient



Performance Specifications

Characteristics	Test Methods	Limits
Temperature coefficient JIS - C - 5202 5.2	Natural resistance change per temp. degree centigrade. $\frac{R_2 - R_1}{R_1 (t_2 - t_1)} \times 10^6$ (PPM / °C) R_1 : Resistance value at room temperature (t_1) R_2 : Resistance value at room temp. plus 100 °C (t_2)	**Range** — **T.C.R.** ≤10Ω — 0~±350PPM/°C 11Ω-99KΩ — 0~±450PPM/°C 100KΩ-1MΩ — 0~±700PPM/°C 1.1MΩ-10MΩ — 0~±1500PPM/°C
Dielectric withstanding voltage JIS - C - 5202 5.7	Resistors shall be clamped in the trough of a 90° metallic V- block and shall be tested at AC potential respectively specified in the above list for 60+ 10 / -0 seconds.	No evidence of flashover, mechanical damage, arcing or insulation break down.
Temperature cycling JIS - C - 5202 7.4	Resistance change after continuous five cycles for duty cycle specified below: **Step** / **Temperature** / **Time** 1 / -55°C ± 3°C / 30 minutes 2 / Room temp / 10~15 minutes 3 / + 155°C ± 3°C / 30 minutes 4 / Room temp / 10~15 minutes	Resistance change rate is ± 1% + 0.05Ω). No evidence of mechanical damage
Short - time overload JIS - C - 5202 5.5	Permanent resistance change after the application of a potential of 2.5 times RCWV for 5 seconds.	Resistance change rate is ± (1% + 0.05Ω) No evidence of mechanical damage
Load life in humidity JIS - C - 5202 7.9	Resistance change after 1,000 hours operating at RCWV with duty cycle of 1.5 hours "on" 0.5 hour "off" in a humidity test chamber controlled at 40°C ± 2°C and 90to 95% relative humidity.	**Resistance value** / **▲R/R** NORMAL TYPE: Less than 100KΩ / ±3%; 100KΩ or more / ±5% FLAME RETARDANT TYPE: Less than 100KΩ / ±5%; 100KΩ or more / ±10%
Load life JIS - C - 5202 7.10	Permanent resistance change after 1,000 hours operating at RCWV, with duty cycle of 1.5 hours "on", 0.5 hour "off" at 70°C ± 2°C ambient.	**Resistance value** / **▲R/R** NORMAL TYPE: Less than 56KΩ / ±2%; 56KΩ or more / ±3% FLAME RETARDANT TYPE: Less than 100KΩ / ±5%; 100KΩ or more / ±10%
Insulation resistance JIS - C - 5202 5.6	Resistors shall be clamped in the trough of a 90° metallic V-block and shall be tested at DC potential respectively specified in the above list for 60 + 10/-0 seconds.	Insulation resistance is 10,000 MΩ Min.
Terminal strength JIS - C - 5202 6.1	**Direct load :** Resistance to a 2.5 kgs direct load for 10 seconds in the direction of the longitudinal axis of the terminal leads. **Twist test :** Terminal leads shall be bent through 90 at point of about 6mm from the body of the resistor and shall be rotated through 360° about the original axis of the bent terminal in alternating direction for a total of 3 rotations.	No evidence of mechanical damage
Resistance to soldering heat JIS - C - 5202 6.4	Permanent resistance change when leads immersed to 3.2 mm to 4.8 mm from the body in 350°C ± 10°C solder for 3 ± 0.5 seconds	Resistance change rate is ± (1% + 0.05W). No evidence of mechanical damage
Solderability JIS - C - 5202 6.5	The area covered with a new, smooth, clean, shiny and continuous surface free from concentrated pinholes. Test temp. of solder : 235°C ± 5°C Dwell time in solder : 3 + 0.5 / - 0 seconds	95% coverage Min.
Resistance to solvent JIS - C - 5202 6.9	Specimens shall be immersed in a bath of trichloroethane completely for 3 minutes with ultrasonic.	No deterioration of protective coatings and markings

*RCWV = Rated Continuous Working Voltage = $\sqrt{\text{Rated Power x Resistance Value}}$