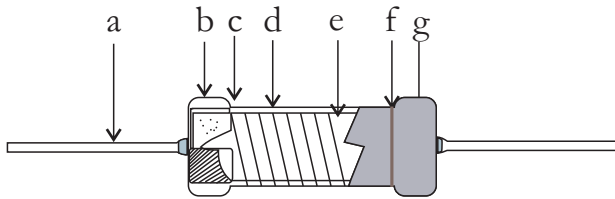


## Construction



## Features

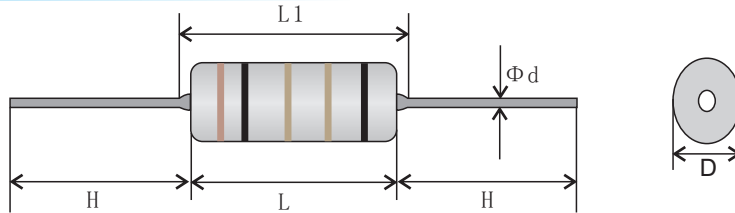
- I High stability, resist humidity
- II High voltage
- III Provide flameproof coating

## Applications

- I Suitable induction cooker
- II High voltage special application

a	Lead wire
b	Cap
c	Ceramic base
d	Helical cutting groove
e	Metal glaze film
f	Marking or color code
g	Insulation coat

## Dimensions



Type	Rated Power (W)	Dimensions(mm)			
		L Max	D Max	$\Phi d^{+0.02}_{-0.05}$	H $\pm 3$
HPR	1/4W	7.0	2.7	0.5	26.0
HPR	1/2W	10.0	3.8	0.6	26.0
HPR	1W	13.0	5.2	0.7	26.0
HPR	2W	17.0	6	0.7	26.0
HPR	3W	18.0	7	0.8	28.0

## Ordering Information

Example:

HPR	14	J	1003
(1)	(2)	(3)	(4)
Series Name	Power Rating	Resistance Tolerance	Resistance

(1) Type: HPR SERIES

(2) Power Rating: 14=1/4W, 12=1/2W, 1=1W, 2=2W, 3=3W

(3) Tolerance: F=  $\pm 1\%$ , G=  $\pm 2\%$ , J=  $\pm 5\%$

(4) Resistance Value: 1003=100K $\Omega$

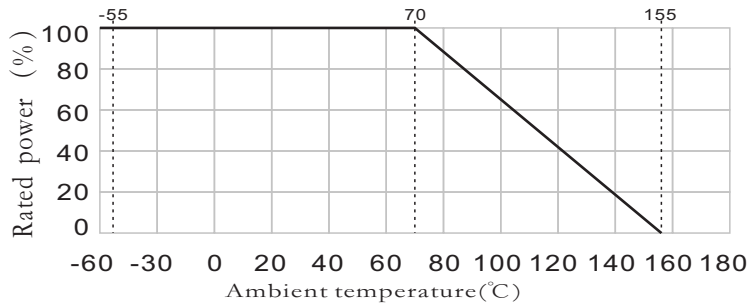
## Reference Standards

JISC 5201-1

## Applications And Ratings

Type	Rated Power (W)	Resistance Range( $\Omega$ )		Limiting element voltage	Max. Overload Voltage	Voltage Proff	T.C.R (ppm/ $^{\circ}$ C)	Operating Temperature Range
		G $\pm$ 2%	J $\pm$ 5%					
HPR	1/4W	100K~1M	100K~5M	500V	1000V	500V	$\pm$ 200 $\pm$ 400	-55~+155 $^{\circ}$ C
HPR	1/2W	100K~1M	100K~10M	600V	1200V	700V		-55~+155 $^{\circ}$ C
HPR	1W	100K~1M	100K~10M	700V	1400V	700V		-55~+155 $^{\circ}$ C
HPR	2W	100K~1M	100K~10M	800V	1600V	700V		-55~+155 $^{\circ}$ C
HPR	3W	100K~1M	100K~10M	800V	1600V	1000V		-55~+155 $^{\circ}$ C

## Derating Curve



For resistors operated in ambient temperature over 70 $^{\circ}$ C, power rating shall be derated in accordance with the figure.

## Performance

Test Items	Performance Requirements/Test Methods(JIS C 5201-1)						
Temperature coefficient of resistance	$\leq \pm 400\text{ppm}/^{\circ}\text{C}$ OR $\leq \pm 200\text{ppm}/^{\circ}\text{C}$						
Overload	$\Delta R \leq \pm (2\%R + 0.05\Omega)$ , there shall be no visible damage and the marking shall be legible						
Voltage proof	There shall be no breakdown of flashover.						
Intermittent overload	$\Delta R \leq \pm (1\%R + 0.05\Omega)$ , there shall be no visible damage and the marking shall be legible						
Robustness of terminations	$\Delta R \leq \pm (0.5\%R + 0.05\Omega)$ , there shall be no visible damage						
Solderability	The terminations shall be examined for good tinning as evidenced by free flowing of the solder with of the terminations.						
Resistance to soldering heat	$\Delta R \leq \pm (1\%R + 0.05\Omega)$ , there shall be no visible damage and the marking shall be legible						
Rapid change of temperature	$\Delta R \leq \pm (1\%R + 0.05\Omega)$ , there shall be no visible damage						
Moisture resistance	$\Delta R/R \leq \pm 5\%$ , there shall be no visible damage						
Endurance(load life)	$\Delta R/R \leq \pm 5\%$ , there shall be no visible damage						
Solvent resistance	There shall be no visible damage and the marking shall be legible						
Flammability	No evidence of flaming or arcing						
Voltage of single-pulse high-voltage overload	Rated Voltage / Resistance	1/4W	1/2W	1W	2W	3W	Requirement
	100K~1M	3KV	4KV	5KV	6KV	8KV	$\Delta R/R \leq \pm 10\%$
	1M1~6M2	4KV	6KV	7KV	8KV	9KV	$\Delta R/R \leq \pm 10\%$
	$\geq 6M8$	5KV	7KV	8KV	9KV	10KV	$\Delta R/R \leq \pm 10\%$
Pulse withstanding voltage	<p>Measure Rx before test S.with for left handside to test under DC3KV-10KV for 2.5 seconds. repeat 10 times , and then off the measure to cool down for 30-40minutes, measure the resistance <math>\Delta R/R \leq \pm 10\%</math>.</p>						