

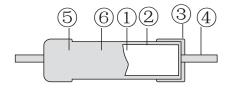
## **HEY Ceramic Composition Resistors**



#### Features

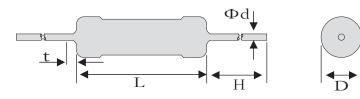
- I Suitable for automatic machine insertion.
- I Ideal for high energy/high peak power applications.
- IV Higher reliability against disconnection compared to wirewound resistors and film resistors.

#### Construction



1	Resistive body	4	Lead wire
2	Inner electrode	(5)	Coating
3	Electrode cap	6	Marking

#### Dimensions



	power	Dimensions(mm)				
Туре	(W)	L±0.5	t Max	D±0.5	Φd±0.05	H±3
HEY	5W	46	3.0	9	1.0	31

## Specifications

Туре	power (W)	Resistance Range( $\Omega$ )	Tolerance	Joules max.**	MaxWorking Voltage
HEY	5W	10 <b>Ω</b> ~390K <b>Ω</b>	K±10%	400	550

<sup>\*</sup> at  $25^{\circ}$ C. \*\*For a single impulse.

## Ordering Information

Example:

HEY 5 K R100
(1) (2) (3) (4)
Series Name Power Resistance Rating Tolerance

(1) Type: HEY SERIES

(2) Power Rating: 5=5W

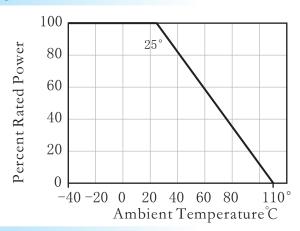
(3) Tolerance:  $K = \pm 10\%$ 

(4) Resistance Value: R100=0.1 R. 1R00=1  $\Omega$ . 10R0=10 $\Omega$ . 100R0=100 $\Omega$ 



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## Derating Curve



### Characteristics

Test Condition			Requirement $\Delta R \pm (+0.05\Omega)$	
Resistance	Resistance $3.3\Omega \sim 8.2\Omega$ $10\Omega \sim 82\Omega$ $100\Omega \sim 390 \text{k}\Omega$	Measurement voltage 0.3V 1.0V 3.0V	Within regulated to tolerance	
TCR	+25°C/-40°C and +25°C/+125°C		<100 <b>Ω</b> : -900+/- 300ppm >>100 <b>Ω</b> : -1200+/-300ppm	
Voltage Coefficient	Rated voltage and rated voltage $\times 10\%$ (Apply for over $1k\Omega$ )		0~-0.05%/V	
Overload	Rated voltage x 2.5 or maximum overload voltage for 5s, whichever less		±2% limit; 0.4% typical	
Single impulse rating	The resistor mounted to the test circuit at right. Single impulse test of 10 ohm resistor resulting in 3.3ms.		$\pm 5\%$ Protection resistor  DC $500 \text{ volts}$ $C=3300 \text{uF}$ Rx	
Resistance to soldering heat	$350^{\circ}\text{C} \pm 10^{\circ}\text{C}, 3.5\text{s} \pm 0.5\text{s}$		$\pm2\%$ limit; 0.8% typical	
Rapid change of temperature	-40°C (30min.)/-5cycles	+85°C (30min.)	$\pm2\%$ limit; 0.4% typical	
Moisture resistance	40°C ± 2°C, 90%~95%RH, 1000h, 1.5h ON/0, 5h OFF cycles		$\pm$ 5% limit; 0.6% typical	
Load life	$40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , 1000h, 1.5h ON/0, 5h OFF cycles		±5% limit; 0.4% typical	
Resistance to Solvent	Dipping in IPA or Xylene for 3 minutes and leaving for 10 minutes after removing drops, then brushing 10 times.		No abnormality in appearance. Marking shall be easily legible.	
Pulse Tolerance	200V, 112 Joules, 10000 cycles, 5600uf capacitor discharge, 26 second rest time		±2%	
Power Rating	Based on 25° (	-		
TCR	$-900 \pm 300$ : R<100 $\Omega$ ,-1200 $\pm 300$ : R $\geq$ 100 $\Omega$			
Voltage	Abs. max. working: 550V,Abs. max. overload: 1100V,Abs. max. pulse: 25kV			
Operating Temp. Range	-40°C to +110°C	,		
Tolerance	±10% standar	d		