

## Anti-Pulse Power Resistors

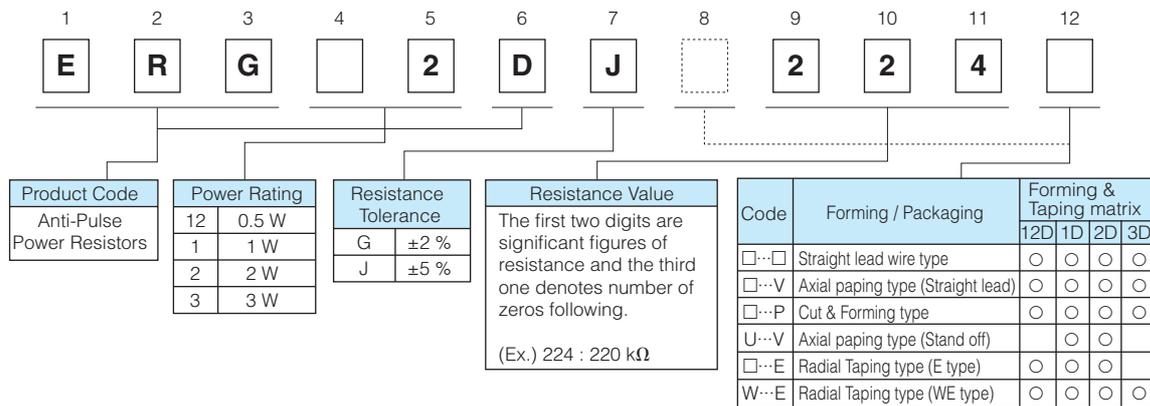
Type: **ERGD**  
(0.5 W, 1 W, 2 W, 3 W)



### Features

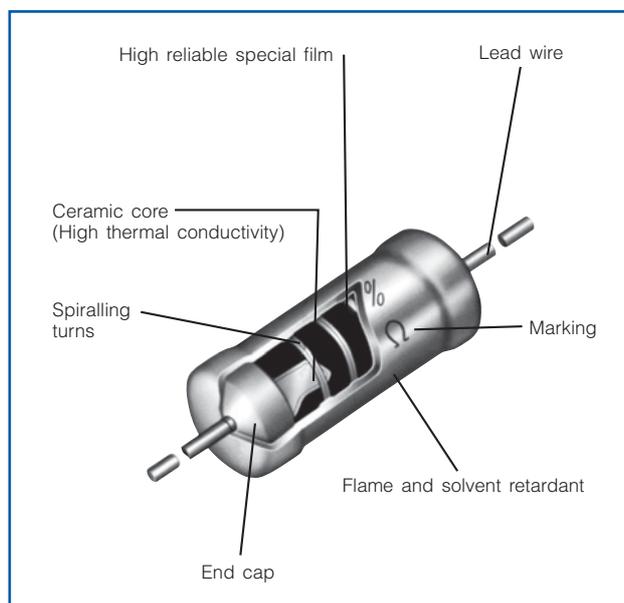
- Miniaturized
- Non-flammable
- Anti-Pulse Characteristic
- Automatic Insertion
- RoHS compliant

### Explanation of Part Numbers

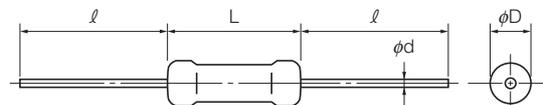


The above example shows an anti-pulse resistor, 2 W power rating, resistance value of 220 k ohms, tolerance  $\pm 5\%$ , and package of standard bulk packing.

### Construction



### Dimensions in mm (not to scale)



Part No.	Dimensions (mm)				Mass (Weight) [g/pc.]
	L	$\phi D$	$l$	$\phi d$	
ERG12D	$6.35^{+0.65}_{-0.35}$	$2.3^{+0.5}_{-0.3}$	$30.0^{\pm 3.0}$	$0.65^{\pm 0.05}$	0.26
ERG1D	$9.00^{+1.50}_{-1.00}$	$2.8^{\pm 0.5}$	$30.0^{\pm 3.0}$	$0.65^{\pm 0.05}$	0.33
ERG2D	$12.00^{+1.50}_{-1.00}$	$4.0^{\pm 1.0}$	$30.0^{\pm 3.0}$	$0.80^{\pm 0.05}$	0.66
ERG3D	$15.00^{\pm 1.50}$	$5.5^{\pm 1.0}$	$38.0^{\pm 3.0}$	$0.80^{\pm 0.05}$	1.47

## Ratings

Part No.	Power Rating at 70 °C (W)	Limiting Element Voltage <sup>(1)</sup> (V)	Maximum Overload Voltage <sup>(2)</sup> (V)	Maximum Intermittent Overload Voltage <sup>(3)</sup> (V)	Dielectric Withstanding Voltage (VAC)	Res. Tol. (%)	Resistance Range (Ω) <sup>(4)</sup>		Standard Resistance Value
							min.	max.	
ERG12D	0.5	400	800	800	500	J (±5) G (±2)	51 k	240 k	E24
ERG1D	1	500	1000	1000	500	J (±5) G (±2)	110 k	330 k	E24
ERG2D	2	500	1000	1000	700	J (±5) G (±2)	110 k	510 k	E24
ERG3D	3	500	1000	1000	700	J (±5) G (±2)	110 k	750 k	E24

(1) Rated Continuous Working Voltage (RCWW) shall be determined from  $RCWW = \sqrt{\text{Power Rating} \times \text{Resistance Value}}$  or Limiting Element Voltage listed above whichever less.

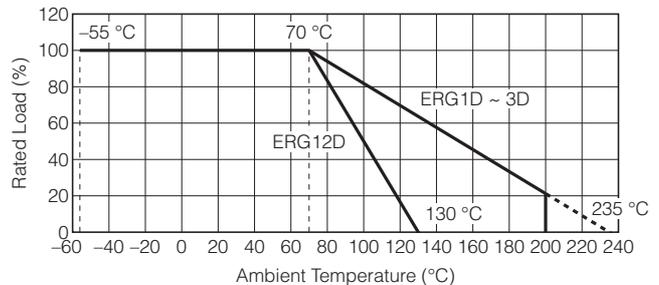
(2) Overload (Short-time Overload) Test Voltage (SOTV) shall be determined from  $SOTV = 2.5 \times \text{Power Rating}$  or max. Overload Voltage listed above whichever less.

(3) Intermittent Overload Test Voltage (IOTV) shall be determined from  $IOTV = 4.0 \times \text{Power Rating}$  or max. Intermittent Overload Voltage listed above whichever less.

(4) Resistance tolerance and resistance range is of use besides range listed, please inquire.

### Power Derating Curve

For resistors operated in ambient temperatures above 70 °C, power rating shall be derated in accordance with the figure on the right.



### ■ As for Packaging Methods and / or cut formed leads,

Please see Metal (Oxide) Film Resistors Packaging Methods

### ⚠ Safety Precautions

The following are precautions for individual products. Please also refer to the common precautions for Fixed Resistors in this catalog.

#### 1. Transient voltage

If there is a possibility that the transient phenomenon (significantly high voltage applied in a short time) may occur or that a high voltage pulse may be applied, make sure to evaluate and check the characteristics of Anti-Pulse Power Resistors (hereafter called the resistors) mounted on your product rather than only depending on the calculated power limit or steady-state conditions to complete the design or decide to use the resistors.

- The resistors are covered with a special coating. Do not apply shock or vibration to them, or pinch them with long-nose pliers. Otherwise, the resistors may be damaged.
- Do not apply excessive tension to the lead-connected sections. When bending the lead wire, do not apply excessive stress to the resistors and provide the wire with a natural curvature.
- Do not brush the resistors during or after the cleaning process, which may be conducted after soldering. Otherwise, the coating film may be damaged.