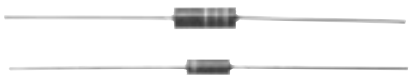
Hot-Molded, Fixed Carbon Composition Resistors



Type: **ERC14G**
ERC12G

■ Features

- Composed with high pure phenole resin and the akin material yesis for element.
- Absortion of electric shock (Pulse, Surge voltage)
- Solid body, suitabe for automatic insertion
- High reliablity

■ Recommended Applications

- Provide a conductive path between the power supply circuit and external antenna or cable system input.

■ Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11
E	R	C	1	2	G	M	1	0	5	

Product Code
Hot-Molded, Fixed Carbon Composition Resistors

Power Rating at 70°C amb.	
14	0.25 W
12	0.5 W

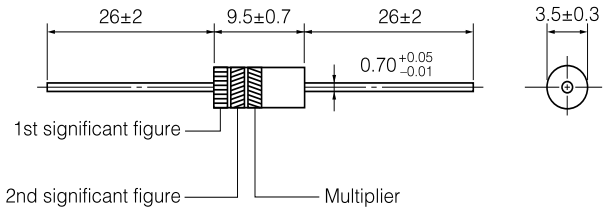
Maximum Ambient Temperature at Full Load	
Code	Temp.
G	70°C

Resistance Tolerance	
M	± 20 %

Resistance Value
The first two digits are significant figures of resistance and the third one denotes number of zeros following.

Suffix for Packaging and / or Cut & Formed Leads	
Code	Type
Nil	Standard bulk packing
C	C type Cut & Formed
D	D type Cut & Formed
V	Taped & Box

■ Dimensions in mm (not to scale)



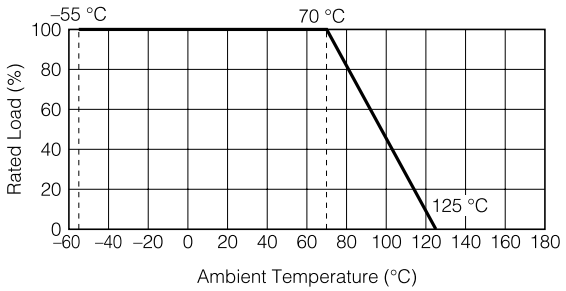
■ Rating

Part. No.	Power Rating at 70 °C (W)	Limiting Element Voltage (Maximum RCWV)(1) (V)	Maximum Overload Voltage (V)	Dielectric Withstanding Voltage (V)	Standard Resistance Value	Resistance Tolerance (%)	Resistance Range (Ω)		Mass (Weight) [mg/pc.]
							min.	max.	
ERC14G	0.25	250	400	500	E6	±20	2.2	22 M	220
ERC12G	0.5	350	700	700	E6	±20	2.2	22 M	420

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

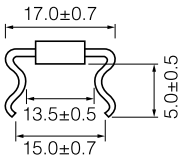
Power Derating Curve

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

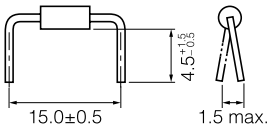


■ Cut & Formed Dimensions (mm)

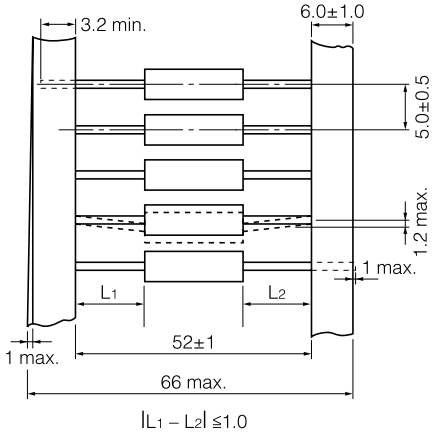
Type D



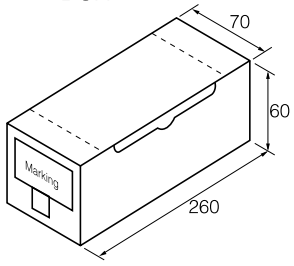
Type C



■ Taped & Box Dimensions (mm)



BOX



Part No.	Quantity (pc/box)
ERC14GM□□□V	2000
ERC12GM□□□V	1000

⚠Cautions for Safety

The following are precautions for individual products. Please also refer to the precautions common to Fixed Resistors shown on page ER3 of this catalog.

1. Do not store Hot-Molded, Fixed Carbon Composition Resistors (hereafter called the Resistors) in a hot and/or humid place. Otherwise, they will absorb moisture, and the resistance values will change over time. For long-term storage, keep the temperature and humidity low (25 °C and 45 % RH max.)
2. Do not perform extended soldering at a high temperature. Otherwise, the soldering heat may deteriorate the performance or substantially change the resistances. Follow the soldering conditions shown below:
   (1) Soldering position → 3 mm or more away from the root of the Resistors' bodies.
   (2) Soldering temperature and time
   Soldering with an iron Iron tip temperature → 350 °C max., within 3 sec.
   Flow soldering Solder temperature → 250 °C max., within 5 sec.
3. If a transient load (heavy load in a short time) like a pulse is expected to be applied, check and evaluate the operations of the Resistors when installed in your products under the most adverse conditions before use.

⚠Caution for Safety
(Common precautions for Fixed Resistors)

- When using our products, no matter what sort of equipment they might be used for, be sure to make a written agreement on the specifications with us in advance. The design and specifications in this catalog are subject to change without prior notice.
- Do not use the products beyond the specifications described in this catalog.
- This catalog explains the quality and performance of the products as individual components. Before use, check and evaluate their operations when installed in your products.
- Install the following systems for a failsafe design to ensure safety if these products are to be used in equipment where a defect in these products may cause the loss of human life or other significant damage, such as damage to vehicles (automobile, train, vessel), traffic lights, medical equipment, aerospace equipment, electric heating appliances, combustion/gas equipment, rotating equipment, and disaster/crime prevention equipment.

✻ Systems equipped with a protection circuit and a protection device
✻ Systems equipped with a redundant circuit or other system to prevent an unsafe status in the event of a single fault

(1) Precautions for use

- These products are designed and manufactured for general purpose and standard use in general electronic equip ment (e.g. AV equipment, home electric appliances, office equipment, information and communication equipment)
- These products are not intended for use in the following special conditions. Before using the products, carefully check the effects on their quality and performance, and determine whether or not they can be used.
  1. In liquid, such as water, oil, chemicals, or organic solvent
  2. In direct sunlight, outdoors, or in dust
  3. In salty air or air with a high concentration of corrosive gas, such as Cl_2, H_2S, NH_3, SO_2, or NO_2
  4. In an environment where strong static electricity or electromagnetic waves exist
  5. In an environment where these products cause dew condensation
  6. Sealing or coating of these products or a printed circuit board on which these products are mounted, with resin or other materials
- These products generate Joule heat when energized. Carefully position these products so that their heat will not affect the other components.
- Carefully position these products so that their temperatures will not exceed the category temperature range due to the effects of neighboring heat-generating components. Do not mount or place heat-generating components or inflammables, such as vinyl-coated wires, near these products .
- Note that non-cleaning solder, halogen-based highly active flux, or water-soluble flux may deteriorate the perfor mance or reliability of the products.
- Carefully select a flux cleaning agent for use after soldering. An unsuitable agent may deteriorate the performance or reliability. In particular, when using water or a water-soluble cleaning agent, be careful not to leave water residues. Otherwise, the insulation performance may be deteriorated.

(2) Precautions for storage

The performance of these products, including the solderability, is guaranteed for a year from the date of arrival at your company, provided that they remain packed as they were when delivered and stored at a temperature of 5 °C to 35 °C and a relative humidity of 45 % to 85 %.

Even within the above guarantee periods, do not store these products in the following conditions. Otherwise, their electrical performance and/or solderability may be deteriorated, and the packaging materials (e.g. taping materials) may be deformed or deteriorated, resulting in mounting failures.

1. In salty air or in air with a high concentration of corrosive gas, such as Cl_2, H_2S, NH_3, SO_2, or NO_2
2. In direct sunlight

<Package markings>
Package markings include the product number, quantity, and country of origin.
In principle, the country of origin should be indicated in English.