

## Metal Film Resistors, Industrial, ± 2 % and ± 5 % Tolerance



### FEATURES

- Dual power rating:  
 $P_{70} = 0.25\text{ W}$  with 1.5 % stability  
 $P_{70} = 0.50\text{ W}$  with 2.0 % stability
- ± 2 % and ± 5 % tolerance
- Temperature coefficient: ± 100 ppm/K and ± 200 ppm/K
- Tape and reel packaging for automatic insertion (52.4 mm inside tape spacing per EIA-296-E)
- Flame retardant epoxy conformal coating (red brown color)
- Standard 4 band color code marking for ease of identification after mounting
- Pure tin plating provides compatibility with lead (Pb)-free and lead containing soldering processes
- Compliant to RoHS directive 2002/95/EC



**RoHS**  
COMPLIANT

### STANDARD ELECTRICAL SPECIFICATIONS

PRODUCT	RATED DISSIPATION $P_{70}$ W	LIMITING ELEMENT VOLTAGE MAX. $V_{\equiv}$	TEMPERATURE COEFFICIENT ppm/K	TOLERANCE %	RESISTANCE RANGE $\Omega$	E-SERIES
CCF07	0.25/0.5	250	± 100	± 2, ± 5	10 $\Omega$ to 1 M $\Omega$	E24
CCF07	0.25/0.5	250	± 200	± 5	1.1 M $\Omega$ to 2 M $\Omega$	E24

### TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	CCF07
Rated Dissipation, $P_{70}$	W	0.25/0.5
Maximum Working Voltage, $U_{max}$	$V_{\equiv}$	≤ 250
Insulation Voltage (1 Min)	$V_{eff}$	500
Dielectric Strength	$V_{AC}$	450
Insulation Resistance	$\Omega$	≥ 10 <sup>11</sup>
Operating Temperature Range	°C	- 65 to + 150
Terminal Strength (Pull Test)	lb	2
Weight	g	0.35 max.

### PART NUMBER AND PRODUCT DESCRIPTION

Part Number: CCF07240RGKE36

C C F 0 7 2 4 0 R G K E 3 6

PRODUCT	RESISTANCE VALUE	TOLERANCE CODE	TEMPERATURE COEFFICIENT	PACKAGING	SPECIAL
CCF07	R = Decimal K = Thousand M = Million 10R0 = 10 $\Omega$ 680K = 680 k $\Omega$ 2M00 = 2.0 M $\Omega$	G = ± 2 % J = ± 5 %	K = 100 ppm/K N = 200 ppm/K	E36 = Lead (Pb)-free T/R (5000 pieces)	Blank = Standard (dash number) (up to 3 digits) From 1 to 999 as applicable

**DIMENSIONS** in inches (millimeters)



**MARKING**

The nominal resistance and tolerance are marked on the resistor using four colored bands in accordance with IEC 60062, marking codes for resistors and capacitors.

**RESISTANCE VALUES**

Vishay CCF07 is available in the standard 24 resistance values per decade. Values are obtained from the following decade table by multiplying by powers of 10. As an example: 24 can represent 24  $\Omega$ , 240  $\Omega$ , 2.4 k $\Omega$ , 24 k $\Omega$  or 240 k $\Omega$ .

10	18	33	56
11	20	36	62
12	22	39	68
13	24	43	75
15	27	47	82
16	30	51	91

**TECHNICAL SPECIFICATIONS**

TEST <sup>(1)</sup>	Max. $\Delta R$ (Typical Test Lots)
Thermal Shock	$\pm 1.0\%$
Short Time Overload	$\pm 0.5\%$
Low Temperature Operation	$\pm 0.5\%$
Moisture Resistance	$\pm 1.5\%$
Resistance to Soldering Heat	$\pm 0.5\%$
Shock/Bump	$\pm 0.5\%$
Vibration	$\pm 0.5\%$
Terminal Strength	$\pm 0.5\%$
Dielectric Withstanding Voltage	$\pm 0.5\%$
Life	$\pm 1.5\%$ <sup>(2)</sup>

**Notes**  
<sup>(1)</sup> Test specifications as per IEC 60115-1  
<sup>(2)</sup> Life  $\Delta R$  is  $\pm 2.0\%$  for 1/2 W rating



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