

## Metal Film Resistors, Industrial, ± 1 % Tolerance



### FEATURES

- Dual power rating:  
 $P_{70} = 0.25 \text{ W}$  with 0.5 % stability  
 $P_{70} = 0.50 \text{ W}$  with 1.0 % stability
- Temperature coefficient:  $\pm 100 \text{ ppm/K}$
- Superior electrical performance
- Flame retardant epoxy conformal coating (red brown color)
- Standard 5 band color code marking for ease of identification after mounting
- Tape and reel packaging for automatic insertion (52.4 mm inside tape spacing per EIA-296-E)
- Lead (Pb)-free solder contacts
- Pure tin plating provides compatibility with lead (Pb)-free and lead containing soldering processes
- Compliant to RoHS directive 2002/95/EC



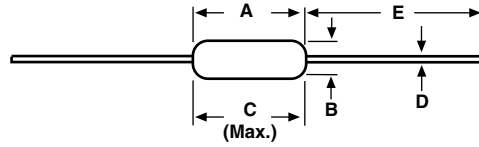
**RoHS**  
COMPLIANT

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
CCF55	0.25/0.5	250	$\pm 100$	$\pm 1$	10 $\Omega$ to 3.01 M $\Omega$	E96

TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	CCF55
Rated Dissipation, $P_{70}$	W	0.25/0.5
Maximum Working Voltage, $U_{max}$	$V_{\equiv}$	$\leq 250$
Insulation Voltage (1 Min)	$V_{eff}$	500
Dielectric Strength	$V_{AC}$	450
Insulation Resistance	$\Omega$	$\geq 10^{11}$
Operating Temperature Range	$^{\circ}\text{C}$	- 65 to + 165
Terminal Strength (Pull Test)	lb	2
Weight	g	0.35 max.

PART NUMBER AND PRODUCT DESCRIPTION																																	
Part Number: CCF55301RFKE36																																	
<table border="1" style="width:100%; text-align:center;"> <tr> <td>C</td><td>C</td><td>F</td><td>5</td><td>5</td><td>3</td><td>0</td><td>1</td><td>R</td><td>F</td><td>K</td><td>E</td><td>3</td><td>6</td><td></td><td></td><td></td> </tr> </table>																	C	C	F	5	5	3	0	1	R	F	K	E	3	6			
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PRODUCT	RESISTANCE VALUE	TOLERANCE CODE	TEMPERATURE COEFFICIENT	PACKAGING	SPECIAL																												
CCF55	R = Decimal K = Thousand M = Million 10R0 = 10 $\Omega$ 680K = 680 k $\Omega$ 1M00 = 1.0 M $\Omega$	F = $\pm 1 \%$	K = 100 ppm/K	E36 = Lead (Pb)-free CCF55 = T/R (5000 pieces)	Blank = Standard (dash number) (up to 3 digits) From 1 to 999 as applicable																												

**DIMENSIONS** in inches (millimeters)

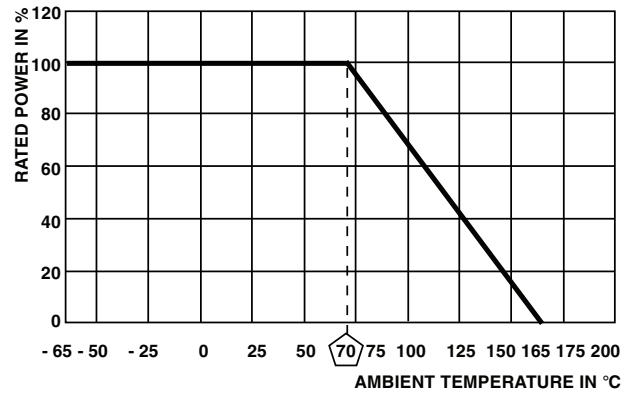


PRODUCT	A	B	C (Max.)	D	E
CCF55	0.245 $\pm$ 0.020 (6.22 $\pm$ 0.51)	0.090 $\pm$ 0.008 (2.29 $\pm$ 0.20)	0.265 (6.73)	0.023 $\pm$ 0.002 (0.60 $\pm$ 0.05)	1.100 $\pm$ 0.040 (27.94 $\pm$ 1.02)

**RESISTANCE VALUES**

Vishay CCF55 is available in the standard 96 resistance values per decade. Values are obtained from the following decade table by multiplying by powers of 10. As an example: 30.1 can represent 30.1  $\Omega$ , 301  $\Omega$ , 3.01 k $\Omega$ , 30.1 k $\Omega$  or 301 k $\Omega$ .

10.0	14.7	21.5	31.6	46.4	68.1
10.2	15.0	22.1	32.4	47.5	69.8
10.5	15.4	22.6	33.2	48.7	71.5
10.7	15.8	23.2	34.0	49.9	73.2
11.0	16.2	23.7	34.8	51.1	75.0
11.3	16.5	24.3	35.7	52.3	76.8
11.5	16.9	24.9	36.5	53.6	78.7
11.8	17.4	25.5	37.4	54.9	80.6
12.1	17.8	26.1	38.3	56.2	82.5
12.4	18.2	26.7	39.2	57.6	84.5
12.7	18.7	27.4	40.2	59.0	86.6
13.0	19.1	28.0	41.2	60.4	88.7
13.3	19.6	28.7	42.2	61.9	90.9
13.7	20.0	29.4	43.2	63.4	93.1
14.0	20.5	30.1	44.2	64.9	95.3
14.3	21.0	30.9	45.3	66.5	97.6



**DERATING**

**MARKING**

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

**PERFORMANCE**

RATED DISSIPATION, $P_{70}$		
CCF55	1/4 W	1/2 W
TEST <sup>(1)</sup>	MAXIMUM $\Delta R$	MAXIMUM $\Delta R$
Thermal Shock	$\pm 0.5\%$	-
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	$\pm 0.5\%$	-
Life	$\pm 0.5\%$	$\pm 1.0\%$
Terminal Strength	$\pm 0.2\%$	-
Dielectric Withstanding Voltage	$\pm 0.5\%$	-

**Note**

<sup>(1)</sup> Test specifications as per IEC 60115-1



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