

## 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



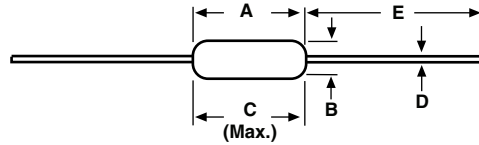
**RoHS**  
COMPLIANT

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)

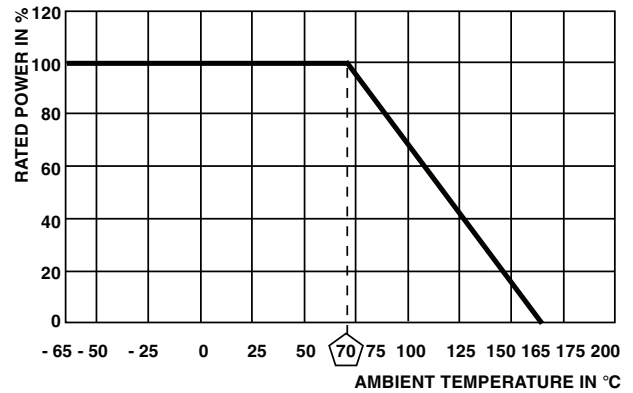


PRODUCT	A	B	C (Max.)	D	E
CCF55	0.245 ± 0.020 (6.22 ± 0.51)	0.090 ± 0.008 (2.29 ± 0.20)	0.265 (6.73)	0.023 ± 0.002 (0.60 ± 0.05)	1.100 ± 0.040 (27.94 ± 1.02)

**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 Ω, 301 Ω, 3.01 kΩ, 30.1 kΩ or 301 kΩ.

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 ΔR	MAXIMUM ΔR
Thermal Shock	± 0.5 %	-
Short Time Overload	± 0.5 %	-
Low Temperature Operation	± 0.5 %	-
Moisture Resistance	± 1.5 %	-
Resistance to Soldering Heat	± 0.5 %	-
Shock/Bump	± 0.5 %	-
Vibration	± 0.5 %	-
Life	± 0.5 %	± 1.0 %
Terminal Strength	± 0.2 %	-
Dielectric Withstanding Voltage	± 0.5 %	-

**Note**

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



## Disclaimer

All product specifications and data are subject to change without notice.

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