CCF55, CCF60

Vishay Dale



Metal Film Resistors, Industrial, ± 1 % Tolerance



FEATURES

- Power Ratings: 1/4, 1/2, 3/4 and 1 W at + 70 °C
- ± 100 ppm/°C temperature coefficient
- Superior electrical performance

identification after mounting

- · Flame retardant epoxy conformal coating
- Standard 5 band color code marking for ease of RoHS COMPLIANT
- Tape and reel packaging for automatic insertion (52.4 mm inside tape spacing per EIA-296-E)
- · Lead (Pb)-free version is RoHS compliant

STANDA	NDARD ELECTRICAL SPECIFICATIONS						
GLOBAL MODEL	HISTORICAL MODEL	POWER RATING P _{70 °C} W	LIMITING ELEMENT VOLTAGE MAX. $V\cong$	TEMPERATURE COEFFICIENT ppm/°C	TOLERANCE %	RESISTANCE RANGE Ω	E-SERIES
CCF55	CCF-55	0.25/0.5	250	± 100	± 1	10R - 3.01M	96
CCF60	CCF-60	0.50/0.75/1.0	500	± 100	± 1	10R - 1M	96

FECHNICAL SPECIFICATIONS				
PARAMETER	UNIT	CCF55	CCF60	
Rated Dissipation at 70 °C	W	0.25/0.5	0.5/0.75/1.0	
Maximum Working Voltage	V≅	≤ 250	≤ 500	
Insulation Voltage (1 min)	V _{eff}	500	500	
Dielectric Strength	V _{AC}	450	450	
Insulation Resistance	Ω	≥ 10 ¹¹	$\geq 10^{11}$	
Operating Temperature Range	°C	- 65/+ 165	- 65/+ 165	
Terminal Strength (pull test)	lb	2	2	
Weight	g	0.35 max	0.75 max	



* Pb containing terminations are not RoHS compliant, exemptions may apply



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DIMENSIONS in inches [millimeters]



GLOBAL MODEL	А	В	C (Max.)	D	E
CCF55	0.245 ± 0.020	0.090 ± 0.008	0.265	0.025 ± 0.002	1.100 ± 0.040
(Sn/Pb)	[6.22 ± 0.51]	[2.29 ± 0.20]	[6.73]	[0.64 ± 0.05]	[27.94 ± 1.02]
CCF55	0.245 ± 0.020	0.090 ± 0.008	0.265	0.023 ± 0.002	1.100 ± 0.040
(Sn)	[6.22 ± 0.51]	[2.29 ± 0.20]	[6.73]	[0.60 ± 0.05]	[27.94 ± 1.02]
CCF60	0.344 ± 0.031	0.139 ± 0.009	0.400	0.025 ± 0.002	1.000 ± 0.040
	[8.74 ± 0.79]	[3.53 ± 0.23]	[10.16]	[0.64 ± 0.05]	[25.40 ± 1.02]

RESISTANCE VALUES

Vishay Dale Models CCF55 and CCF60 are 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 , 30.1 k Ω or 301 k Ω .

3.01 KS2,	30.1 K22 01	301 KS2.			
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

- Color band

PERFORMANCE				
POWER RATING at + 70 °C				
CCF55	1/4 W	1/2 W		
CCF60	1/2 W	3/4 W and 1 W		
TEST ⁽¹⁾	MAXIMUM A R	MAXIMUM AR		
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:

⁽¹⁾ Test Methods per MIL-STD-202G/IEC 60115/DIN EN140000 (as applicable).



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