Vishay Dale



## Metal Film Resistors, Industrial, ± 1%, ± 5% Tolerance



- 0.33 watt power rating
- ± 100ppm/°C standard, ± 50ppm/°C available upon request
- Superior electrical performance
- Flame retardant epoxy conformal coating
- Standard 4 or 5 band color code marking for ease of identification after mounting
- Tape and reel packaging for automatic insertion (52.4mm inside tape spacing per EIA-296-E)
- · Lead (Pb)-Free version is RoHS Compliant





**STANDARD ELECTRICAL SPECIFICATIONS** GLOBAL HISTORICAL **POWER RATING** LIMITING ELEMENT TEMPERATURE TOLERANCE RESISTANCE **E-SERIES** MODEL MODEL VOLTAGE MAX. P<sub>70°C</sub> **COEFFICIENT\*** RANGE w V≌ ppm/°C %  $\Omega$ 96 for 1% CCF50 CCF-50 0.33 200 ± 100 10R - 1M ± 1, ± 5 24 for 5%

\*50ppm/°C on request

TECHNICAL SPECIFICATIONS				
PARAMETER	UNIT	CCF50		
Rated Dissipation at 70°C	W	0.33		
Maximum Working Voltage	V≌	≤ 200		
Insulation Voltage (1min)	V <sub>eff</sub>	>500		
Dielectric Strength	VAC	450		
Insulation Resistance	Ω	≥10¹¹		
Operating Temperature Range	°C	- 65 / + 165		
Weight	g	0.11 max		

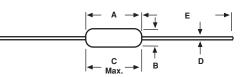
GLOBAL PART NUMBER INFORMATION						
New Global Part Numbering: CCF50301RFKR36 (preferred part numbering format)						
C C F 5 0 3 0 1 R F K R 3 6						
GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE	TEMPERATURE	PACKAGING	SPECIAL	
		CODE	COEFFICIENT			
CCF50	<b>R</b> = Decimal	<b>F</b> = ± 1%	<b>H</b> = 50ppm	<b>E36</b> = Lead Free, T/R (5000 pcs)	Blank=Standard	
	K = Thousand	<b>J</b> = ± 5%	<b>K</b> = 100ppm	<b>R36</b> = Tin/Lead, T/R (5000 pcs)	(Dash Number)	
	M = Million				(up to 3 digits)	
	<b>10R0</b> = 10Ω				From <b>1-999</b>	
	<b>680K</b> = 680KΩ				as applicable	
	<b>1M00</b> = 1.0MΩ					
Historical Part Number example: CCF-503010F (will continue to be accepted)						
CCF-50		3010		F	R36	
HISTORICAL MOD	EL RESIS	STANCE VALUE	TOLERA	NCE CODE P	ACKAGING	

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

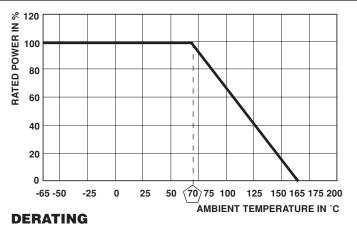




## **DIMENSIONS** in inches [millimeters]



DIMENSION	INCHES	MILLIMETERS	
Α	0.133 ± 0.010	[3.38 ± 0.025]	
В	0.062 ± 0.004	[1.57 ± 0.10]	
C(Max)	0.143	[3.63]	
D	0.020 ± 0.002	[0.51 ± 0.05]	
E	1.125 ± 0.040	[28.58 ± 1.02]	



## MARKING

---- 5 band colorband for  $\pm 1\%$ ---- 4 band colorband for  $\pm 5\%$ 

PERFORMANCE			
TEST*			
Thermal Shock	± 0.1%		
Short Time Overload	± 0.1%		
Low Temperature Operation	± 0.1%		
Moisture Resistance	± 0.2%		
Resistance to Soldering Heat	± 0.05%		
Shock	± 0.1%		
Vibration	± 0.05%		
Life	± 0.5%		
Terminal Strength	± 0.1%		
Dielectric Withstanding Voltage	± 0.05%		

\* Tests per MIL-R-10509.



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