Commercial Grade Metal Film Resistor





- Metal film resistor
- · Conformal coating
- Power ratings from 1/8W to 3W
- Resistance range from 10Ω to $1M\Omega$



Electrical Data

IRC Type	Power Rating at 70°C (W)	Resistance Range (Ohms)	Tolerance (±%)	TCR (±ppm/°C)	Max. Working Voltage (V)	Max. Overload Voltage (V)	Dielectric Withstanding Voltage (V)	
Standard Size								
CMF-1/8	0.125				200	400	400	
CMF-1/4	0.25			250	500	500		
CMF-1/2	0.5	10 1M	10 - 1M 1	100	350	700	700	
CMF-1	1	10 - 1IVI			500	1000	1000	
CMF-2	2					500	1000	1000
CMF-3	3				500	1000	1000	

Environmental Data

Short-time overload	$\Delta R/R \le (\pm 0.5\% + 0.05\Omega)$, with no evidence of mechanical damage.					
Dielectric withstanding voltage	No evidence of flashover, mechanical damage, arcing or insulation breakdown.					
Terminal strength	No evidence of mechanical damage.					
Resistance to Soldering heat	Δ R/R \leq (±1% + 0.05 Ω), with no evidence of mechanical damage.					
Pulse Overload	$\Delta R/R \le (\pm 1\% + 0.05\Omega)$, with no evidence of mechanical damage.					
Solderability	Minimum 95% coverage.					
Resistance to solvent	No deterioration of protective coating and markings.					
Temperature cycling	$\Delta R/R \le (\pm 1\% + 0.05\Omega)$, with no evidence of mechanical damage.					
Load life in humidity	Standard type: $\Delta R/R \pm 3\%$ for <100K Ω , $\pm 5\%$ for ≥ 100 K Ω ;					
Load life	Standard type: Δ R/R ±1.5% Flame retardant type: R/R ±5%					



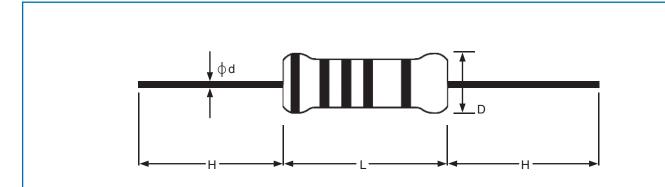
General Note
IRC reserves the right to make changes in product specification without notice or liability. All information is subject to IRC's own data and is considered accurate at time of going to print.



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Physical Data



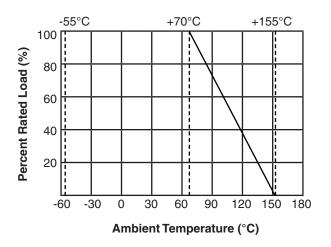
Dimensions (mm)

	IRC Type	D (max.)	L (max.)	d (±0.02)	H (±3)
Standard Size	CMF-1/8	1.85	3.5	0.5	28
	CMF-1/4	2.5	6.8	0.6	28
	CMF-1/2	3.5	10.0	0.6	28
	CMF-1	5.0	12.0	0.7	28
	CMF-2	5.5	16.0	0.8	28
	CMF-3	6.5	17.5	0.8	28

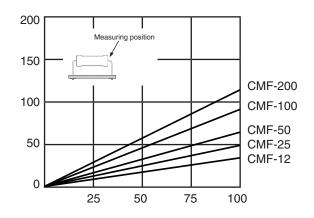
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Derating Curve



Hot Spot Temperature Curve



Ordering Data

Specify type, resistance, tolerance, RoHS-Compliance and packaging. This example is for a Metal Film Resistor, 1-watt, 1000Ω resistor.

Sample Part No. · · · · · · · · · · · · · · · · · · ·	CMF	-	1	100	1	F	LF	TR
	:		:	:		Ξ	$\overline{}$	- :
IRC Type · · · · · · · · · · · · · · · · · · ·	:							
Power Rating · · · · · · · · · · · · · · · · · · ·	••••	•••	:	•				:
Resistance Value (EIA 4-digit code) ($\geq 100\Omega$ - First 3 significant digits plus 4th digit multiplier) Example: 100 ohms = 1000 , 1000 ohms = 1001 ($>100\Omega$ - "R" is used to designate decimal) Example: $10\Omega = 10R0$, $1\Omega = 1R00$, $51\Omega = 51R0$	• • • •	•••	•••	•••		•		
Tolerance $F = \pm 1\%$; $G = \pm 2\%$; $J = \pm 5\%$	• • • •	•••	• • •	• • • •	•••	:	•	•
RoHS- compliance · · · · · · · · · · · · · · · · · · ·	••••	• • •	• • •	•••	• • •	• •	:	•
Packaging	• • • • •	• • •	• • •	• • •	• • •	• • •	• •	• • • •