

# Commercial Grade Metal Film Resistor



## CMF Series

### Features:

- Metal film resistor
- Conformal coating
- Power ratings from 1/8W to 3W
- Resistance range from 10Ω to 1MΩ



## NOT RECOMMENDED FOR NEW DESIGNS

### 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	10 – 1M	1	100	200	400	400
CMF-1/4	0.25				250	500	500
CMF-1/2	0.5				350	700	700
CMF-1	1				500	1000	1000
CMF-2	2				500	1000	1000
CMF-3	3				500	1000	1000

### Environmental Data

Short-time overload	$\Delta R/R \leq (\pm 0.5\% + 0.05\Omega)$ , 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	$\Delta R/R \leq (\pm 1\% + 0.05\Omega)$ , with no evidence of mechanical damage.
Pulse Overload	$\Delta R/R \leq (\pm 1\% + 0.05\Omega)$ , with no evidence of mechanical damage.
Solderability	Minimum 95% coverage.
Resistance to solvent	No deterioration of protective coating and markings.
Temperature cycling	$\Delta R/R \leq (\pm 1\% + 0.05\Omega)$ , with no evidence of mechanical damage.
Load life in humidity	Standard type: $\Delta R/R \pm 3\%$ for $<100K\Omega$ , $\pm 5\%$ for $\geq 100K\Omega$ ;
Load life	Standard type: $\Delta R/R \pm 1.5\%$ Flame retardant type: $R/R \pm 5\%$

#### General Note

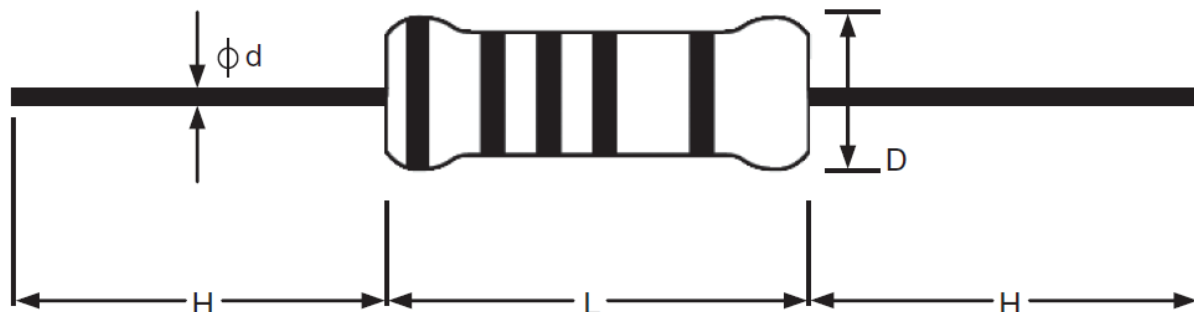
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	IRC Type	D (max.)	L (max.)	d ( $\pm 0.02$ )	H ( $\pm 3$ )
Standard Size	CMF-1/8	1.85	3.5	0.5	28
	CMF-1/4	2.5	6.8	0.6	28
	CMF-1/2	3.5	10.0	0.6	28
	CMF-1	5.0	12.0	0.7	28
	CMF-2	5.5	16.0	0.8	28
	CMF-3	6.5	17.5	0.8	28

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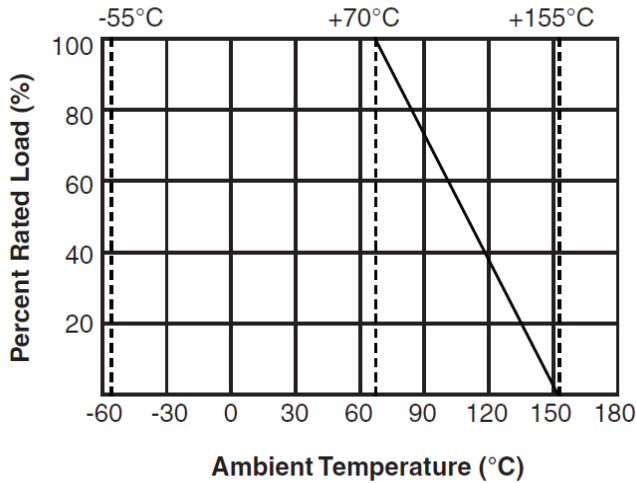
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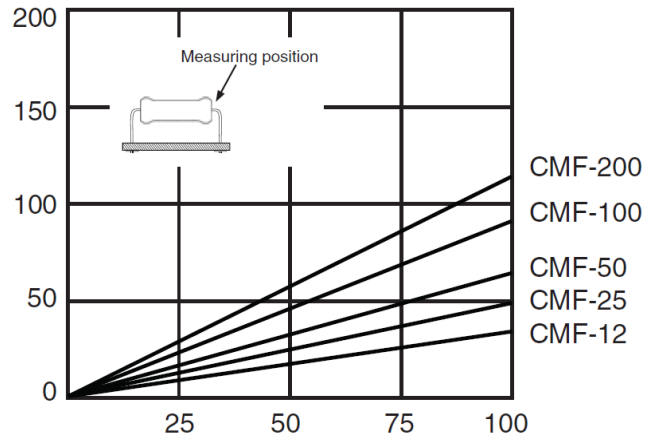


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**Derating Curve**



**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** **1001** **F** **LF** **TR**

**IRC Type** .....  
CMF - Metal Film Resistor

**Power Rating** .....  
(See specs table)

**Resistance Value (EIA 4-digit code)** .....  
(≥ 100Ω - First 3 significant digits plus 4th digit multiplier)  
Example: 100 ohms = 1000, 1000 ohms = 1001  
(>100Ω - "R" is used to designate decimal)  
Example: 10Ω = 10R0, 1Ω = 1R00, 51Ω = 51R0

**Tolerance** .....  
F = ±1%; G = ±2%; J = ±5%

**RoHS- compliance** .....  
LF = RoHS compliant construction

**Packaging** .....  
TR = tape and reel only

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BI Technologies IRC Welwyn

www.ttelectronics.com/resistors  
TT Electronics, 4222 South Staples St., Corpus Christi, TX 78411, USA  
TT Electronics, Welwyn Electronics Park, Bedlington, Northumberland, NE22 7AA, UK

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