

Commercial Grade Metal Film Resistor

CMF Series

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



NOT RECOMMENDED FOR NEW DESIGNS

 All parts are Pb-free and comply with EU Directive 2011/65/EU amended by (EU) 2015/863 (RoHS3)

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

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

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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** **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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