

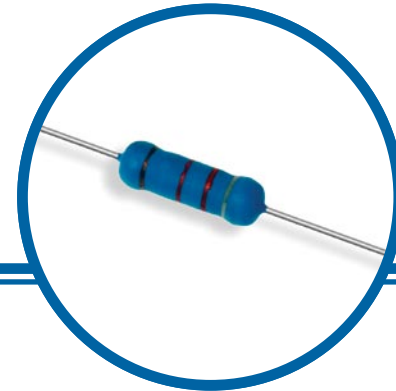
# CMO Series

Commercial Grade Metal Oxide Resistor



IRC Wire and Film Technologies Division

- Power ratings from 1/4W to 9W
- Stable performance in harsh environments
- Superior flame retardant coating
- High purity ceramic core
- Meets EIA-RC2655A requirements
- Non-inductive type available



## Specifications

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)
<b>Standard Size</b>							
CMO-1/4	0.25	0.3 - 50K	2, 5, 10	350	250	400	250
CMO-1/2	0.5	0.3 - 50K	2, 5, 10		250	400	250
CMO-1	1	0.3 - 50K	2, 5, 10		350	600	350
CMO-2	2	0.3 - 50K	2, 5, 10		350	600	350
CMO-3	3	5 - 100K	2, 5, 10		500	800	500
CMO-5	5	5 - 150K	2, 5, 10		750	1000	750
CMO-7	7	20 - 150K	2, 5, 10		750	1000	750
CMO-8	8	30 - 200K	2, 5, 10		750	1000	750
CMO-9	9	50 - 200K	2, 5, 10		750	1000	750
<b>Miniature Size</b>							
CMO-1/2S	0.5	0.3 - 50K	2, 5, 10	350	250	400	250
CMO-1S	1	0.3 - 50K	2, 5, 10		350	600	350
CMO-2S	2	0.3 - 50K	2, 5, 10		350	600	350
CMO-3S	3	0.3 - 50K	2, 5, 10		350	600	350
CMO-5SS	5	5 - 100K	2, 5, 10		500	800	500
CMO-5S	5	5 - 150K	2, 5, 10		500	800	500

**General Note**

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## Environmental Performance

<b>Short-time overload</b>	Standard Size, $\Delta R/R \leq (\pm 1\% + 0.05\Omega)$ , with no evidence of mechanical damage. Miniature Size, $\Delta R/R \leq (\pm 2\% + 0.05\Omega)$ , with no evidence of mechanical damage.
<b>Dielectric withstanding voltage</b>	No evidence of flashover, mechanical damage, arcing or insulation breakdown.
<b>Pulse overload</b>	Standard Size, $\Delta R/R \leq (\pm 2\% + 0.05\Omega)$ , with no evidence of mechanical damage. Miniature Size, $\Delta R/R \leq (\pm 5\% + 0.05\Omega)$ , with no evidence of mechanical damage.
<b>Terminal strength</b>	No evidence of mechanical damage.
<b>Resistance to Soldering heat</b>	$\Delta R/R \leq (\pm 1\% + 0.05\Omega)$ , with no evidence of mechanical damage.
<b>Solderability</b>	Minimum 95% coverage.
<b>Resistance to solvent</b>	No deterioration of protective coating and markings.
<b>Temperature cycling</b>	$\Delta R/R \leq (\pm 2\% + 0.05\Omega)$ , with no evidence of mechanical damage.
<b>Humidity (Steady state)</b>	$\Delta R/R \leq (\pm 2\% + 0.05\Omega)$ , with no evidence of mechanical damage.
<b>Load life in humidity</b>	$\Delta R/R: \leq \pm 5\%$ for $< 100K\Omega$ ; $\pm 10\%$ for $\geq 100K\Omega$ .
<b>Load life</b>	$\Delta R/R: \leq \pm 5\%$ for $< 100K\Omega$ ; $\pm 10\%$ for $\geq 100K\Omega$ .
<b>Flame retardant</b>	No evidence of flaming or arcing.

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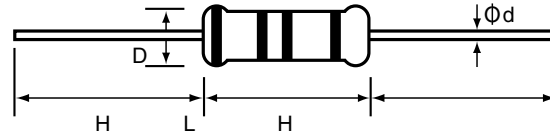
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## Dimensions (mm)



	IRC Type	D (max.)	L (max.)	d ( $\pm 0.02$ )	H ( $\pm 3$ )
<b>Standard Size</b>	CMO-1/4	2.5	7.5	0.6	28
	CMO-1/2	4.0	10.0	0.6	28
	CMO-1	5.0	12.0	0.7	28
	CMO-2	5.5	16.0	0.8	28
	CMO-3	6.5	17.5	0.8	28
	CMO-5	8.5	26.0	0.8	38
	CMO-7	8.5	32.0	0.8	38
	CMO-8	8.5	41.0	0.8	38
	CMO-9	8.5	54.0	0.8	38
	<b>Miniature Sizes</b>	CMO-1/2S	3.0	7.5	0.6
CMO-1		4.5	10.0	0.7	28
CMO-2		5.0	12.0	0.7	28
CMO-3		5.5	16.0	0.8	28
CMO-5SS		6.5	17.5	0.8	28
CMO-5S		8.0	25.0	0.8	38

- Standard gray base color for standard size product; Blue color for miniature size product
- Standard non-flammable coating

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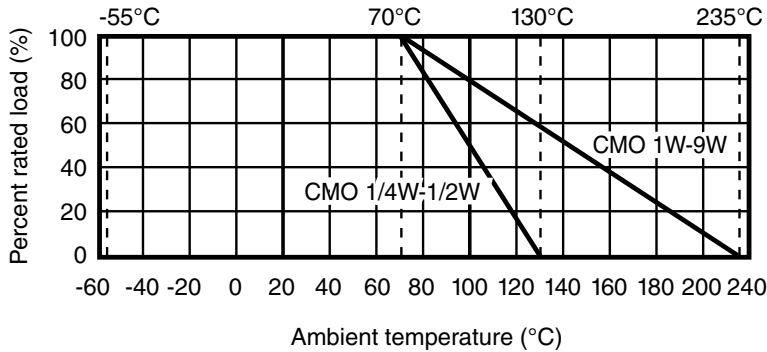


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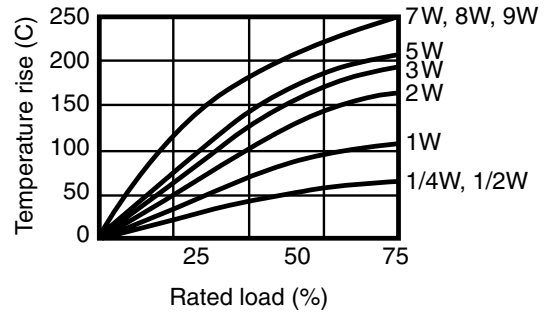
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## Performance Curves

### Derating Curve

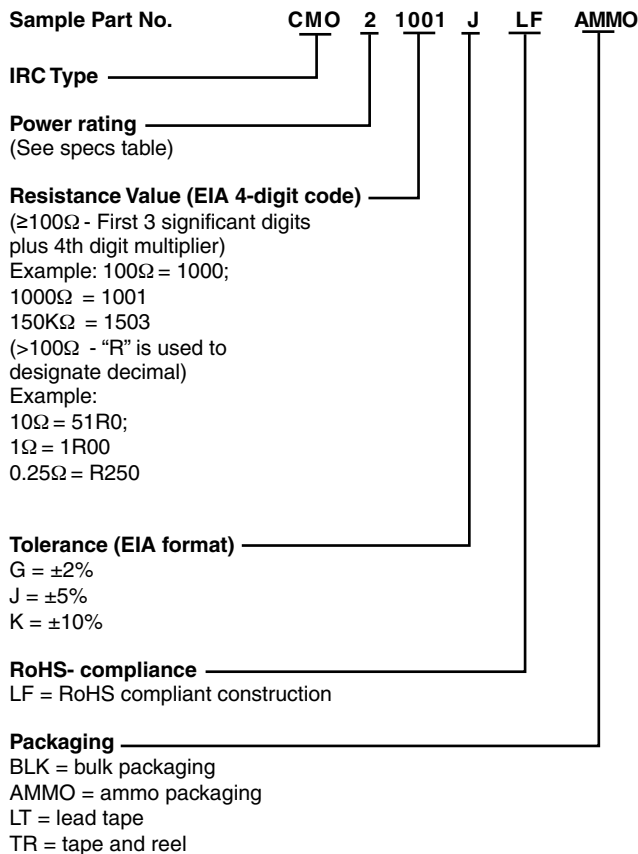


### Temperature Rise Chart



## Ordering Data

Specify type, resistance, tolerance, RoHS-Compliance and packaging. This example is for a Metal Oxide Resistor, 2-watt, 1000Ω resistor.



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