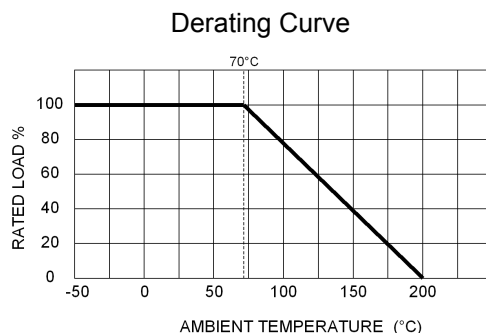
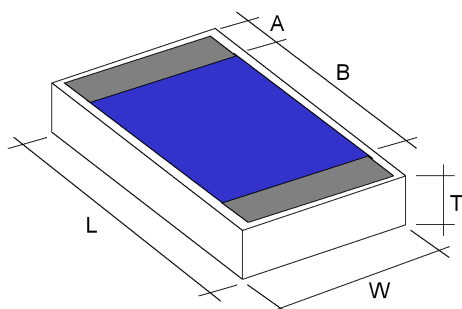


Medium Voltage Low Cost Chip Resistors Series MVLC

Medium Voltage Chip Resistors MVLC combine proprietary Thick Film Technology and design to achieve medium / high voltage ratings in a low cost SMD solution. Nicrom's technology features a longer, medium aspect ratio trace of lower resistivity film compared to traditional thick film chip resistors.

Compared to standard chip resistors Nicrom's MVLC Series provides higher performances, lower voltage coefficients, temperature coefficients to 50 ppm/C, tighter tolerances to 0.5% and higher voltage ratings to 5'000 Volts. 3-sided wraparound terminations, wire bondable gold terminations and custom configurations available.



Model-Size	Wattage @ 70°C	Max. Continuous Oper. Voltage	Dimensions in millimeters [Dimensions in inches]				
			L	W	T (max.)	A	B (min.)
1206	0.30	750	3.25 ± 0.20 [0.128 ± 0.008]	1.60 ± 0.20 [0.063 ± 0.008]	0.70 [0.028]	0.45 ± 0.20 [0.018 ± 0.008]	1.95 [0.077]
2010	0.50	1100	5.10 ± 0.20 [0.200 ± 0.008]	2.50 ± 0.20 [0.098 ± 0.008]	0.80 [0.032]	0.55 ± 0.20 [0.022 ± 0.008]	3.70 [0.146]
2512	1.00	1'500	6.40 ± 0.20 [0.252 ± 0.008]	3.20 ± 0.20 [0.126 ± 0.008]	0.80 [0.032]	0.65 ± 0.20 [0.026 ± 0.008]	5.00 [0.200]
4020	1.50	2'000	10.16 ± 0.20 [0.400 ± 0.008]	5.08 ± 0.20 [0.200 ± 0.008]	0.80 [0.032]	1.00 ± 0.20 [0.040 ± 0.008]	7.50 [0.295]
5020	2.00	2'500	12.70 ± 0.20 [0.500 ± 0.008]	5.08 ± 0.20 [0.200 ± 0.008]	0.80 [0.032]	2.00 ± 0.30 [0.079 ± 0.012]	8.00 [0.315]
8020	2.50	3'500	20.32 ± 0.20 [0.800 ± 0.008]	5.08 ± 0.20 [0.200 ± 0.008]	1.00 [0.040]	2.00 ± 0.30 [0.079 ± 0.012]	15.60 [0.615]
10020	3.00	5'000	25.40 ± 0.20 [1.000 ± 0.008]	5.08 ± 0.20 [0.200 ± 0.008]	1.00 [0.040]	2.00 ± 0.30 [0.079 ± 0.012]	20.70 [0.815]

Characteristics

Resistance Values	from 100Ω to as high as 100MΩ on all models except 1206 max 30MΩ and 2010 max 60MΩ
Tolerances	0.5%, 1%, 2%, 5%, 10% (for tighter tolerances please use Series HVC)
Temperature Coefficients*	50 or 100 ppm/°C (for low temperature coefficients please use Series HVC)
Operating Temperature	-55 ... + 200°C (extended temperature range to 350°C available)
Insulation Resistance	> 10'000 MΩ 500 Volt 25 °C 75% relative humidity
Dielectric Strength	> 1'000 Volt 25 °C 75% relative humidity
Thermal Shock	Δ R/R < 0.50% typical MIL Std. 202, method 107 Cond. C IEC 68 - 2 -14
Overload	Δ R/R < 0.1% typical 1,5 x Pnom, 5 sec (do not exceed max. voltage)
Moisture Resistance	Δ R/R < 0.1% typical MIL Std. 202, method 106 IEC 68 - 2 - 3
Load Life	Δ R/R < 0.50% typical 1000 hours at rated power IEC 115 - 1
Encapsulation	Screen Printed Silicone Core Material Al ₂ O ₃ (96%)
Solder Pads Material	Silver (PdAg) / Bondable Gold / Tinned Resistor Material Ruthenium Oxide
Termination Style	Flip-chip single side termination (standard) or 3-sided wraparound termination available (option W)

* Temperature Coefficient referenced to 25°C, ΔR taken at +125°C.

Voltage Coefficients of Resistance

Type	Resistance Range	VCR (- ppm/V)*	Type	Resistance Range	VCR (- ppm/V)*	Type	Resistance Range	VCR (- ppm/V)*
1206	100R .. 30M	< 10	4020	100R .. 100M	< 3	10020	100R .. 100M	< 1
2010	100R .. 60M	< 7	5020	100R .. 100M	< 2	*Typical values. VCR strongly depends on the resistance value, consult factory for details.		
2512	100R .. 100M	< 5	8020	100R .. 100M	< 1			