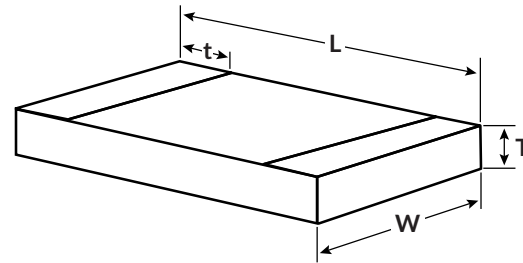


LOW-OHM CHIP RESISTORS

ML SERIES 0.10W to 3W



RESISTOR



FEATURES

- ▶ Industry's widest range and lowest cost! Values as low as 0.0005Ω, current rating to 60 Amp.
- ▶ High power to size ratio
- ▶ Non-inductive

CUSTOM OPTIONS

- ▶ **Opt. V:** 170°C operating temperature range
- ▶ **Opt. EK:** Group A screening per MIL-R-10509
- ▶ **Opt. EL:** Group A & B screening per MIL-R-10509

RCD's ML Series offers cost-effective solutions for low resistance applications and are particularly ideal for various types of current sensing, voltage dividing, battery and pulse circuits, including linear and switching power supplies, power amplifiers, consumer electronics, etc. The resistance element is thick film or metal plate, and is coated with high temperature insulation for exceptional environmental protection.

RCD TYPE	MAX * WATTAGE @ 70°C (W)	MAX * CURRENT @ 70°C (A)	RESISTANCE RANGE	TYPICAL TC (ppm/°C)	OPTIONAL TC (ppm/°C)	DIMENSIONS In [mm]			
						L	W	T	t
ML0402	0.100	3.0	0.020Ω - 0.049Ω	400	200, 100	0.040±0.004 [1.0±0.10]	0.020±0.004 [0.50±0.10]	0.014±0.004 [0.35±0.10]	0.010±0.004 [0.25±0.10]
			0.050Ω - 0.099Ω	300	200, 100				
			0.100Ω - 1.0Ω	200	100				
ML0603	0.125	3.5	0.010Ω - 0.049Ω	400	200, 100	0.061±0.005 [1.55±0.12]	0.031±0.004 [0.80±0.10]	0.016±0.006 [0.40±0.15]	0.012±0.008 [0.30±0.20]
			0.050Ω - 0.099Ω	300	200, 100				
			0.100Ω - 1.0Ω	200	100				
ML0805	0.250	5.0	0.010Ω - 0.049Ω	400	200, 100	0.079±0.008 [2.0±0.20]	0.050±0.008 [1.25±0.20]	0.020±0.006 [0.50±0.15]	0.024±0.008 [0.60±0.20]
			0.050Ω - 0.099Ω	300	200, 100				
			0.100Ω - 1.0Ω	200	100, 300				
ML1206	0.500	7.0	0.010Ω - 0.049Ω	400	200, 100	0.126±0.008 [3.20±0.20]	0.063±0.008 [1.60±0.20]	0.020±0.006 [0.50±.15]	0.030±0.018 [0.76±0.46]
			0.050Ω - 0.099Ω	300	200, 100				
			0.100Ω - 1.0Ω	200	100				
ML2010	1.0	14	0.010Ω - 0.049Ω	400	200, 100	0.197±0.008 [5.0±0.20]	0.098±0.008 [2.50±0.20]	0.020±0.060 [0.50±0.15]	0.032±0.020 [0.80±.50]
			0.050Ω - 0.099Ω	300	200, 100				
			0.100Ω - 1.0Ω	200	100				
ML2512	2.0	20	0.005Ω - 0.049Ω	400	200, 100	0.250±0.010 [6.35±0.25]	0.126±0.012 [3.20±0.30]	0.024** [0.60±0.20]	0.040±0.020 [1.0±0.50]
			0.050Ω - 0.099Ω	300	200, 100				
			0.100Ω - 1.0Ω	200	100				
MLB2512	2.0 / 3.0 *	60	0.0005Ω	350	200, 100	0.250±0.010 [6.35±0.25]	0.126±0.012 [3.20±0.30]	0.020** [0.50~1.60]	0.040** [1.0~2.70]
			0.00075Ω - 0.0010Ω	200	100, 50				
			0.0015Ω - 0.0020Ω	200	100, 50				
			0.0025Ω - 0.10Ω	150	100, 50				

* In order to operate at maximum wattage and current ratings, a suitable substrate or PCB design is required to carry the current and drain the heat. Heavy Cu, large pads and traces, and/or multilayer PC boards are recommended. MLB2512 has a 3W rating when used with 300mm² x 0.0056 Cu pads.

** Varies with resistance value (lower values typically have thicker bodies and wider termination pads for increased current carrying capability).

TYPICAL PERFORMANCE

CHARACTERISTICS	ΔR
Operating Temperature Range	-55°C to +155°C
Thermal Shock (-55°C to +155°C)	±1%
Short Time Overload (2x [P _{xR}] ^{1/2} , 5 sec.)	±2%
Low Temperature Operation (-55°C)	±1%
High Temperature Exposure (125°C, 100 hrs)	±1%
Resistance to Solder Heat	±0.50%
Moisture Resistance	±1%
Load Life (1000 hrs)	±2%
Derating of Wattage & Current	1.177%/°C above 70°C
Solderability	95% MIN Coverage
Terminal Adhesion	15 grams MIN

PART NUMBER DERIVATION

