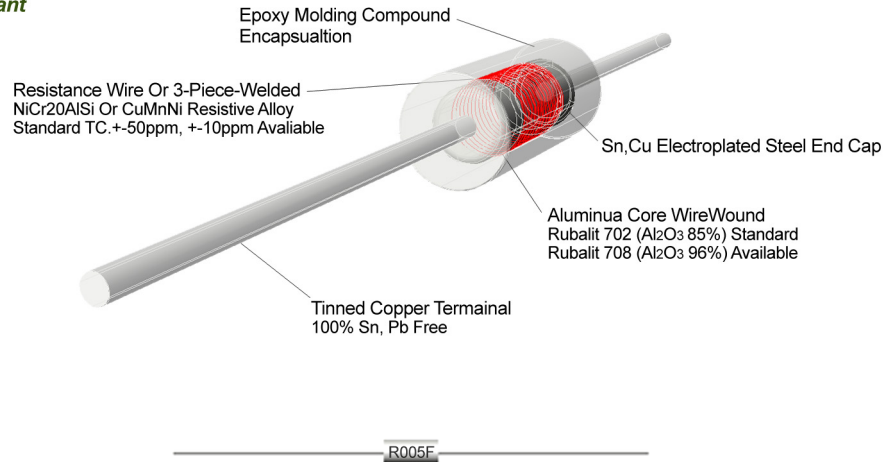




# RWLM Current Sensing Resistor

Resistive Metal, Milliohm Technology, Epoxy Molded

RoHS  
Compliant



## FEATURES

- Ultra Low Resistance Value ( Range 0.005Ω ~ 0.100Ω ) Products Are Designed For Satisfy The Highest Demand Of Current Sensing Applications.
- Precision Resistance Alloy ( NiCr20AlSi, Or CuMnNi ) Material Selected For Low Temperature Coefficient ( <50ppm/°C ), Superior Overload As Well As Surge, Pulse Durability Characteristics.
- Superior Temperature Coefficient Characteristics TCR. Materials' Resistance Vs. Temperature Change Form 25°C ~ 125°C Within 20ppm/°C ~ 180ppm/°C
- Low Inductance, Low Thermo EMF ( <50 μV/°C )
- High Power-To-Size Ratio, Epoxy Body Contour Designed For Heat Dissipation.
- Customized Specification OEM/ODM Manufacturing Mode Available Upon Request.

## APPLICATIONS

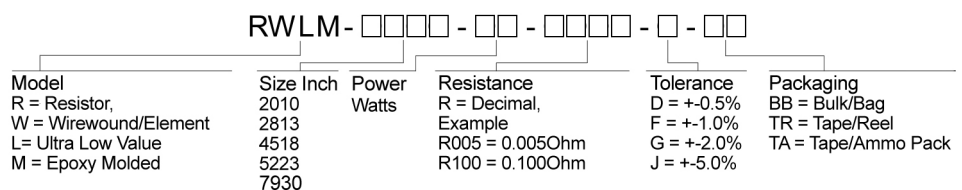
- Industrial Electronics, Power Electronics – Power supply, DC/DC-Converter, AC/DC-Converter, Motor Controller...Applications
- Automotive – Control System, Chassis, Power Train, Lighting... Electric Applications
- Also Industries including White Goods, 3C Products, Communication, and Medical...

## ELECTRICAL SPECIFICATION

Model	Unit	RWLM1/2	RWLM1	RWLM2	RWLM3	RWLM5
Size (Epoxy Body L.x D. )	Inches	2010	2813	4518	5324	7930
Power Rating P*	Watts	1/2W	1W	2W	3W	5W
Resistance Range R**	Ohm	R005 ~ R100	R005 ~ R100	R003 ~ R100	R003 ~ R100	R003 ~ R100
Standard Tolerance %	±%	0.5%, 1%, 5%				
Temperature Coefficient ***	ppm/°C	0.005Ω~0.020Ω ±150ppm, 0.020Ω~0.050Ω ±125ppm, >0.050Ω ±90ppm				
Operating Temperature	°C	-55°C ~ +155°C				
Maximum Working Voltage	Volts	( PxR ) <sup>1/2</sup>				
Weight 1000pcs	gm	100	125	175	250	

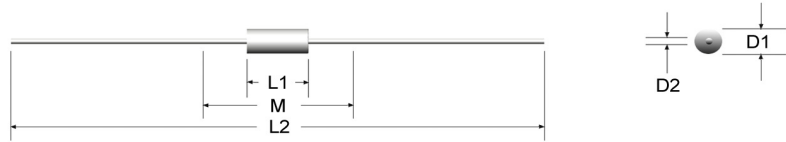
P.\*= Power rating at 70°C, R\*\*.= Nominal DC Resistance at 25°C, TCR\*\*\*= Two standard series of test temperature, First series : 25°C, 0°C, -15°C and -55°C, The second series : 25°C, 50°C, 75°C, 125°C, and 150°C  
 $TCR = (R_2 - R_1) / R_1 (T_2 - T_1) \times 10^5$ .

## PART NUMBER



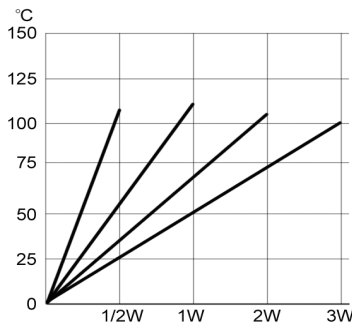
- Consult with our R&D team for special purpose use of components.

**DIMENSIONS** Inches / Millimeters

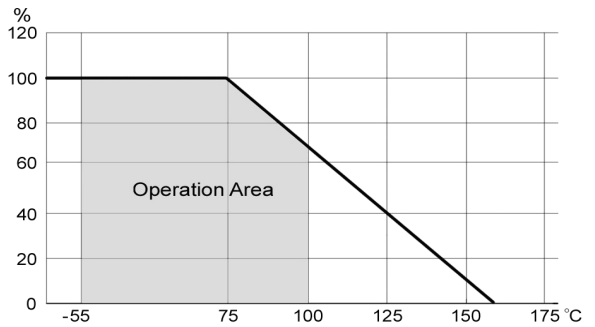


Model	Dimensions inches / millimeters +-inches					
	L1 ±0.020"	L2 ±0.020"	D1 ±0.020"	D2 ±0.020"	M ±0.020"	Taping Width
RWIM1/2	0.200 / 05.08	2.36 / 60.00	0.100 / 2.54	0.0236 / 0.60	0.905 / 23.00	2.519 / 64.00
RWIM1	0.276 / 07.00		0.130 / 3.30		1.008 / 25.60	
RWIM2	0.450 / 11.57		0.180 / 4.57	0.0314 / 0.80	1.122 / 28.51	
RWIM3	0.530 / 13.54	3.15 / 80.00	0.216 / 5.50	0.0393 / 1.00	1.202 / 30.54	3.307 / 82.00
RWIM5	0.790 / 20.00		0.295 / 7.50		1.438 / 36.54	

**TEMPERATURE RISE** (In °C)



**DERATING** (Rated Power In %)



**PERFORMANCE CHARACTERISTICS**

Parameter / Standard	Conditions Of Test	Test Results
Thermo Shock MIL-STD-202 Method 107	Environmental chamber, -65°C +0°C, -5°C to 125°C +3°C, -0°C, 5 cycles, Minimum 5 minute at each extremes	±(0.5% + 0.5mΩ)ΔR
Short Time Overload MIL-PRF-49465 4.8.8	Overload voltage : 5 Times rated wattage for 5 seconds	±(0.5% + 0.5mΩ)ΔR
Solderability JIS C 5201 4.17	Bath temp. ( 235±5 )°C, Immersion time ( 2±0.5)s, Depth from 2+0/-0.5mm of body	>90% contact face covered new solder
Resistance To Solder Heat JIS C 5201 4.18	Bath temp. (260±5)°C, Immersion Time ( 5±0.5)s,	±(0.5% + 0.5mΩ)ΔR
Dielectric W/ Voltage MIL-STD-202 Method 202	Magnitude of test voltage : > 1000 volts rms. Duration 1 minute	Pass
Insulation Resistance MIL-STD-202 Method 302	Magnitude of test voltage : 500 ±10% volts rms. Duration 1 minute	>10 <sup>9</sup> Ω
High Temp.Exposure JIS C 5202 7.11	Exposed to an ambient temperature of 175°C +3°C, -0°C, 250 ±8 hours	±(2.0%+0.5mΩ)ΔR
Low Temperature Storage JIS C 5202 7.1	At a temperature of -65°C ±2°C for a period of 72 ±4 hours	±(1.5%+0.5mΩ)ΔR
Life MIL-STD-202 Method 108	Test temperature At 70°C ±2°C, Rated DC continuous working voltage applied, 1.5 hours on and 0.5 hours off. 1000 hour	±(2.0%+0.5mΩ)ΔR

**PACKAGING** Inches / Millimeter

Model	Tape Width	Pitch	Reel Dia.	Pc /Reel	Parts No.	Pc / Bulk
RWIM2010	2.520 / 64.0	0.197 / 5.00	11.41/ 290	4000	TR20	250
RWIM2813				3000	TR28	250
RWIM4518				1000	TR45	250
RWIM5322	3.307 / 84.0			750	TR53	250
RWIM7930				500	TR79	250

**ADVANCED WIRE WINDING TECHNOLOGY**