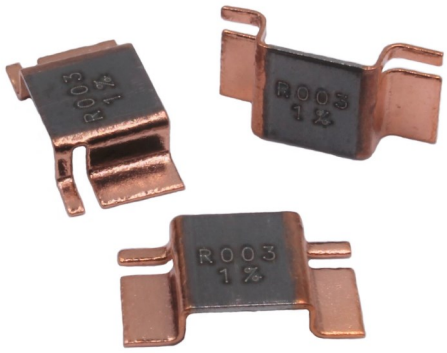
Low Resistance Metal Alloy Power Resistors

LRMAP4026



Features:

- 4-terminal Kelvin gullwing terminations
- Resistance range 0.2mΩ to 3mΩ
- 5W rating in compact footprint
- Robust welded construction
- Low inductance

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

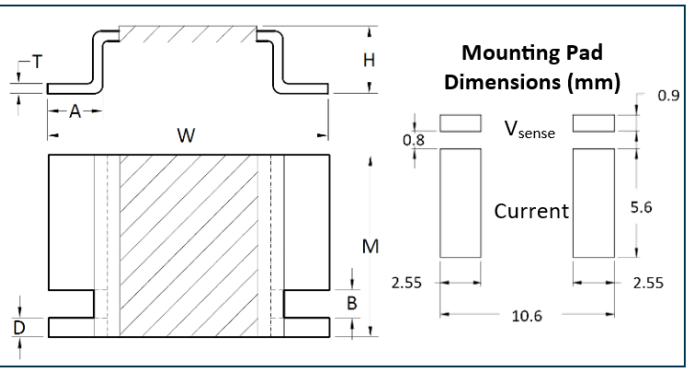
Electrical Data

		LRMAP4026						
Resistance value	mΩ	0.2 (L20)	0.3 (L30)	0.5 (L50)	0.7 (L70)	1.0 (1L0)	2.0 (2L0)	3.0 (3L0)
Power rating, P_{r100}	W	5						4
Alloy		A	B				C	
Internal thermal impedance, R_{thi}	°C/W	4	5	7	9	13	16	20
TCR (resistive alloy)	ppm/°C	±20	-40 to 0					
TCR (resistor)	ppm/°C	±75					±50	
Resistance tolerance	%	±1						
Inductance	nH	<3						
Ambient temperature range	°C	-65 to +170						

Physical Data

Dimensions in mm and weight in g

Value	Alloy	M ±0.3	W ±0.3	H ±0.5	D ±0.1	A ±0.2	B ±0.15	T ±0.1	Wt. nom.
L20	A	6.6	10.1	3.0	0.7	2.0	1.0	0.4	0.46
L30	B								
L50									0.34
L70									0.31
1L0									0.23
2L0	C								0.32
3L0									0.24



Marking

The component is laser marked with ohmic value (using R to indicate decimal position in ohms) and tolerance.

Solvent Resistance

The component is resistant to all normal industrial cleaning solvents suitable for printed circuits.

Construction

The component is formed from a continuous band of E-beam welded precision resistive strip. Different resistance alloys are used based on the resistance value. The component is supplied without plating.

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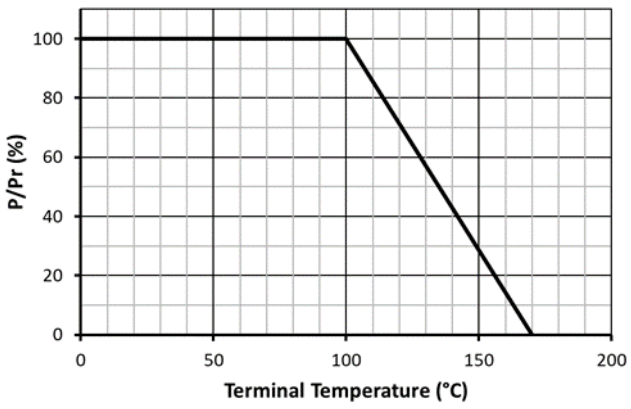
Performance Data

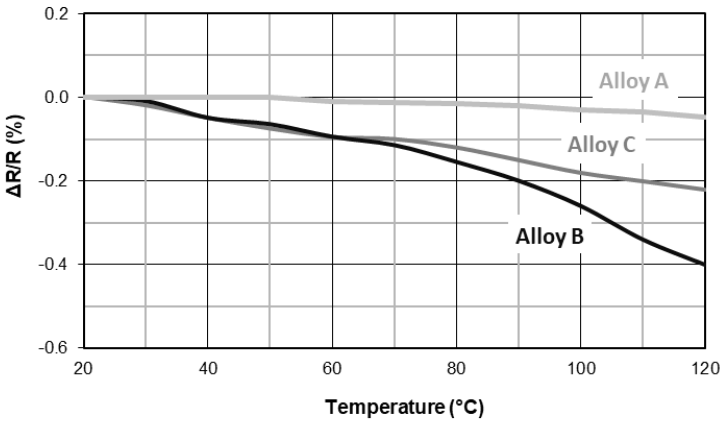
Test	Methods	Reference	ΔR
Load Life	1000 hours, cyclic load at T_A =125°C, rated power per Temperature Derating graph below	MIL-STD-202 Method 108	±0.5%
Short Term Overload	5 × P_{r100} for 5s	--	±0.5%
High Temperature Exposure	1000 hours, T_A=170°C, unpowered	MIL-STD-202 Method 108	±0.5%
Temperature Cycle	1000 cycles, -55°C to +125°C	JESD22 Method JA-104	±0.5%
Biased Humidity	1000 hours, 85°C/85%RH, 10% of P_{r100}	MIL-STD-202 Method 103	±0.5%
Vibration	10 – 2000Hz, 5g, 20min, 12 cycles/axis x 3 axes	MIL-STD-202 Method 204	±0.5%
Resistance to Solder Heat	260 ± 5°C, 10 ± 1s	MIL-STD-202 Method 210	±0.5%
Solderability	245 ± 5°C, 5 ± 0.5s	J-STD-002	>95% coverage

Temperature Derating

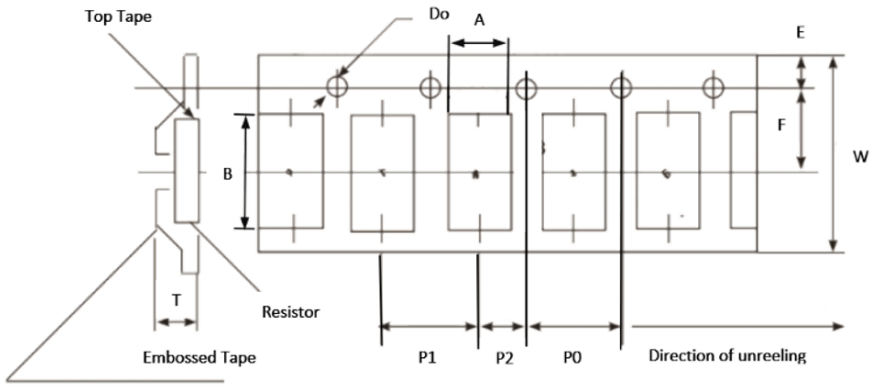
(0.5% Stability)



Typical Temperature Characteristic



Packaging



All dimensions in mm

Size	A	B	W	E	F	P_0	P_1	P_2	D_0	T	Reel dia.
4026	7.5	12.1	24	1.75	12.2	12	12	6	1.5	3.5	330

Ordering Procedure

Example: LRMAP4026B-1L0FT1 (1 milliohm ±1%, Pb-free)

L	R	M	A	P	4	0	2	6	B	-	1	L	0	F	T	1
1									2		3			4	5	

1 Type	2 Alloy	3 Value	4 Tolerance	5 Packing
LRMAP4026	A	3 characters L = milliohms	F = ±1%	T1 = plastic tape, 1000/reel
	B			
	C			