

PROVISIONAL

Features:

- Resistance range 0.3mΩ to 10mΩ
- Power rating up to 6W
- Robust welded construction
- Low inductance
- AEC-Q200 qualified



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

Electrical Data

		LRMAH2512									
Resistance value	mΩ	0.3 (L30)	0.5 (L50)	1 (1L0)	1.3 (1L3)	2 (2L0)	3 (3L0)	4 (4L0)	5 (5L0)	6.8 (6L8)	10 (10L)
Thermal impedance, R _{thi}	°C/W	4	7	12	15	17	20	25	40	55	65
Power rating, P _{r70}	W	6		5			4	3	2.5	2	1.5
Power rating, P _{r100}	W	3					2		1.5		1
Alloy		E	B			C					
TCR (resistive alloy)	ppm/°C	±10				±25					
TCR (resistor)	ppm/°C	±100	±75	±50							
Resistance tolerance	%	1									
Inductance	nH	<2									
Ambient temperature range	°C	-55 to +170									
Current rating, zero-ohm (0L0)	A	100									
Residual resistance, zero-ohm (0L0)	μΩ	≤65									

Physical Data

Dimensions in mm and weight in g				
Value	Alloy	T ±0.1	Shape	Wt. nom.
L30	E	0.95	X	
L50	B	0.85		
1L0		0.42		
1L3		0.33		
2L0		0.67		
3L0	C	0.45	Y	
4L0		0.33		
5L0				
6L8				
10L	Z	0.42	X	
0L0				

0.35±0.03

1.14

3±0.3

2.5±0.25

1.8±0.25

3.05±0.2

6.35±0.15

6.35±0.15

R0.25

R0.25

6.35±0.15

Shape X

Shape Y

** Tolerance
Ts0.67: +0/-0.4
Ts>0.67: +0/-0.7

Mounting Pad
Dimensions (mm)

3.4

1.8

3.4

3.4

Current

Sense

Marking

Parts with values up to and including 4L0 are laser marked with ohmic value (using R to indicate decimal position in ohms). Parts with higher values are unmarked.

Solvent Resistance

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

Construction

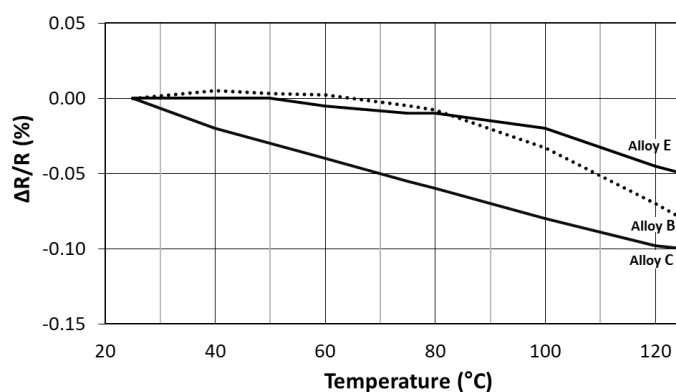
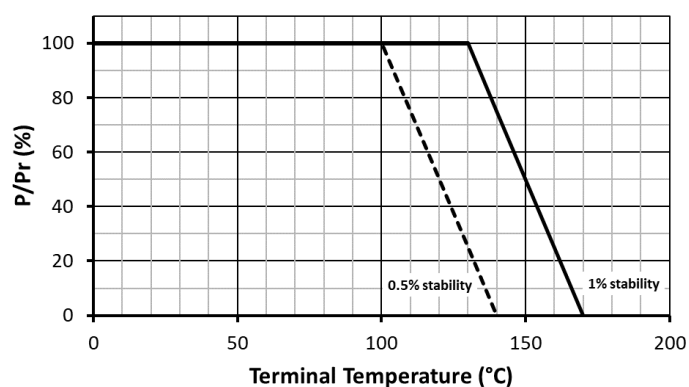
The component is formed from a continuous band of E-beam welded precision resistive strip. Different resistance alloys are used based on the resistance value.

Performance Data

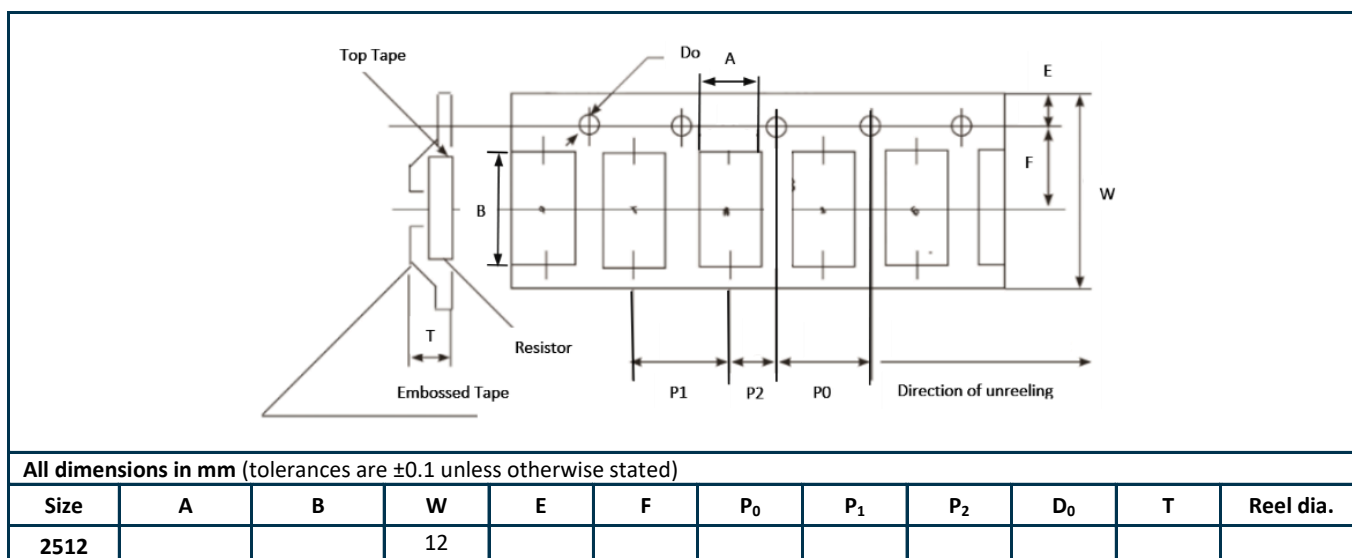
Test	Methods	Reference	ΔR
Load life	1000 hours, cyclic load at $T_A = 125^\circ\text{C}$, rated power per Temperature Derating graph below	MIL-STD-202 Method 108	$\pm 1\%$
Short Term Overload	$5 \times P_{r100}$ for 5 s	--	$\pm 1\%$
High Temperature Exposure	1000 hours, $T_A = 170^\circ\text{C}$, unpowered	MIL-STD-202 Method 108	$\pm 1\%$
Low Temperature Storage	-65°C for 24hrs	--	$\pm 0.2\%$
Temperature Cycle	1000 cycles, -55°C to 150°C , 30 minutes dwell	JESD22 Method JA-104	$\pm 0.5\%$
Biased Humidity	1000 hours, $85^\circ\text{C}/85\%\text{RH}$, 10% of P_{r100}	MIL-STD-202 Method 103	$\pm 0.5\%$
Vibration	10 - 2000Hz, 5g, 20min, 12 cycles/axis x 3 axes	MIL-STD-202 Method 204	$\pm 0.2\%$
Mechanical Shock	100g, 6ms, half-sine	MIL-STD-202 Method 213	$\pm 0.2\%$
Resistance to Solder Heat	$260 \pm 5^\circ\text{C}$, $10 \pm 1\text{s}$	MIL-STD-202 Method 210	$\pm 0.5\%$
Solderability	$235 \pm 5^\circ\text{C}$, $2 \pm 0.5\text{s}$	J-STD-002	>95% coverage
Resistance to Solvents	Clean with aqueous chemical	MIL-STD-202 Method 215	No damage

Temperature Derating (P_{r100})

Typical Temperature Characteristic



Packaging



Ordering Procedure

Example: LRMAH2512B-1L0FT5 (1 milliohm $\pm 1\%$, Pb-free)

LRMAH2512Z-0L0T5 (zero-ohm link, Pb-free)

L	R	M	A	H	2	5	1	2	B	-	1	L	0	F	T	5
L	R	M	A	H	2	5	1	2	Z	-	0	L	0		T	5
1									2		3			4	5	

1 Type	2 Alloy	3 Value	4 Tolerance	5 Packing
LRMAH2512	B	3 characters	F = $\pm 1\%$	T5 = plastic tape, 5000/reel
	C	L = milliohms	Omit for zero-ohm	
	E	0L0 = zero-ohm		
	Z			

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[LRMAH2512B-0L5FT5](#) [LRMAH2512B-1I0FT5](#) [LRMAH2512E-0L3FT5](#) [LRMAH2512E-L30FT5](#) [LRMAH2512B-L50FT5](#)