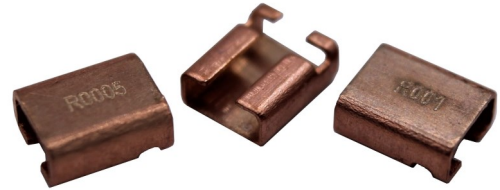


LRMAP1216

Features:

- 4-terminal Kelvin J-lead terminations
- Resistance range 0.5mΩ and 1mΩ
- 3 and 5W rating in compact footprint
- Robust welded construction
- Low inductance
- AEC-Q200 Qualified



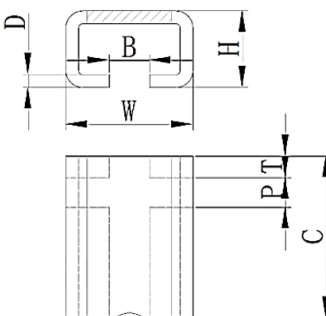
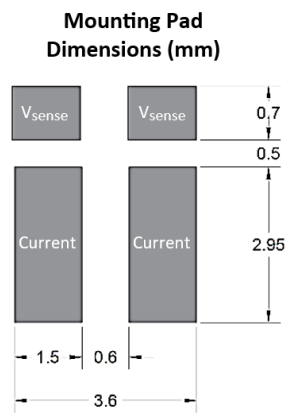
All parts are Pb-free and comply with EU Directive 2011/65/EU amended by (EU) 2015/863 (RoHS3)

Electrical Data

		LRMAP1216	
Resistance value	mΩ	0.5	1.0
Power rating, P _{r130}	W	5	3
Alloy		E	A
TCR (resistive alloy)	ppm/°C	±10	±15
TCR (resistor)	ppm/°C	±50	
Resistance tolerance	%	±0.5, ±1, ±3, ±5	
Inductance	nH	<3	
Ambient temperature range	°C	-65 to +170	

Physical Data

Dimensions in mm and weight in mg									
Value	Alloy	W ±0.2	H ±0.2	B ±0.3	D ±0.1	C ±0.2	P ±0.1	T ±0.1	Wt. nom.
L50	E	3	1.8	0.95	0.3	4	0.7	0.5	66
1L0	A								60

Marking

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

Solvent Resistance

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

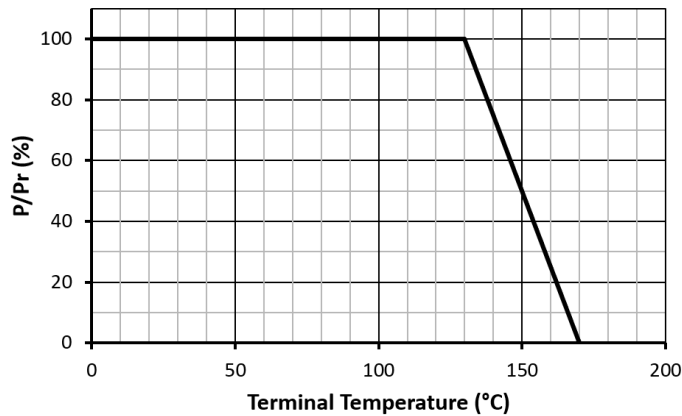
Construction

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.

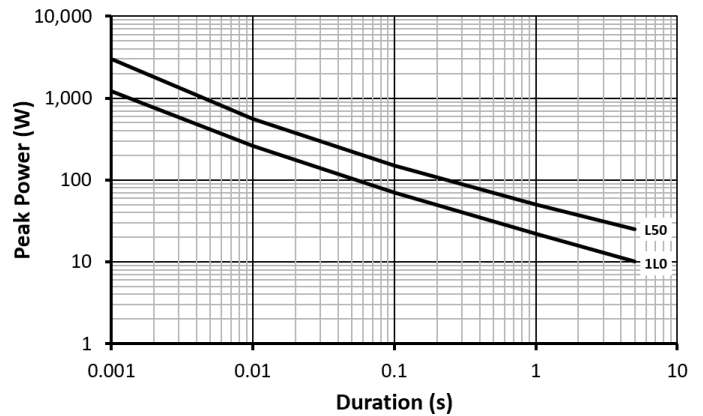
Performance Data

Test	Methods	Reference	ΔR
Load life	1000 hours, cyclic load at $T_{Term} = 130^{\circ}C$, P_{r130}	MIL-STD-202 Method 108	$\pm 1\%$
Short Term Overload	$5 \times P_{r130}$ for 5 s	--	$\pm 0.5\%$
High Temperature Exposure	2000 hours, $T_A = 170^{\circ}C$, unpowered	MIL-STD-202 Method 108	$\pm 1\%$
Low Temperature Storage	$-65^{\circ}C$ for 250hrs	--	$\pm 0.1\%$
Temperature Cycle	1000 cycles, $-55^{\circ}C$ to $150^{\circ}C$, 30 minutes dwell	JESD22 Method JA-104	$\pm 0.5\%$
Biased Humidity	1000 hours, $85^{\circ}C/85\%RH$, 10% of P_{r130}	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	$260 \pm 5^{\circ}C$, $10 \pm 1s$	MIL-STD-202 Method 210	$\pm 0.5\%$
Solderability	$245 \pm 5^{\circ}C$, $5 \pm 0.5s$	J-STD-002	>95% coverage
Resistance to Solvents	Clean with aqueous chemical	MIL-STD-202 Method 215	No damage

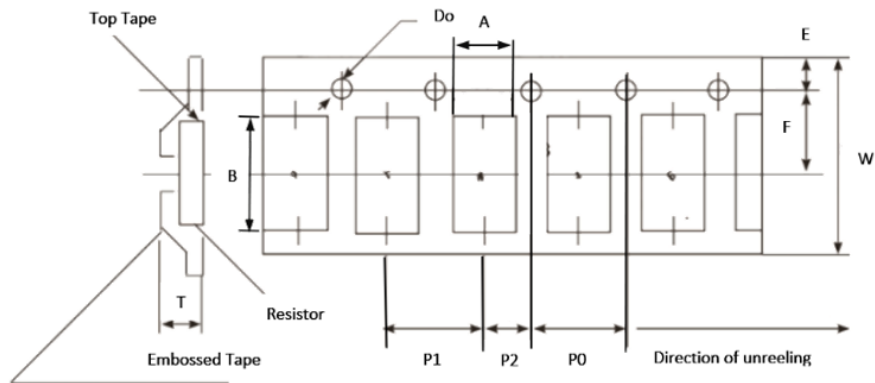
Temperature Derating



Single Pulse Performance



Packaging



Orientation in tape:
The parts are oriented with the voltage sense terminations towards the sprocket hole side of the tape.

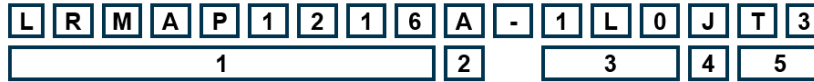
All dimensions in mm (tolerances are ± 0.1 unless otherwise stated)

Size	A	B	W	E	F	P ₀	P ₁	P ₂	D ₀	T	Reel dia.
1216	3.3	4.2	12 \pm 0.3	1.75	5.5	4	8	2	1.5	2.2	330

LRMAP1216

Ordering Procedure

Example: LRMAP1216A-1L0J T3 (1 milliohm $\pm 5\%$, Pb-free)



1 Type	2 Alloy	3 Value	4 Tolerance	5 Packing
LRMAP1216	A	3 characters L = milliohms	D = $\pm 0.5\%$	T3 = plastic tape, 3000/reel
	E		F = $\pm 1\%$	
			H = $\pm 3\%$	
			J = $\pm 5\%$	