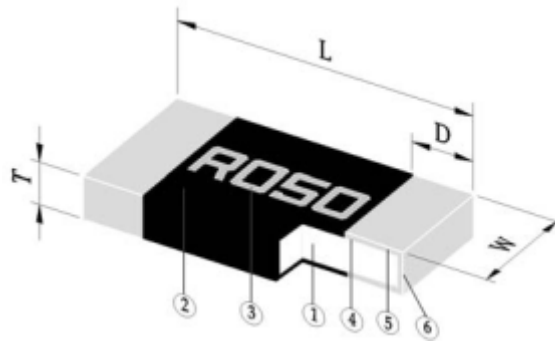


Construction



① Alloy Plate	② Overcoat (molding)	③ Marking
④ Internal Electrode (Cu)	⑤ Barrier Layer (Ni)	⑥ Solder Plating (Sn)

Features

- High power rating up to 3 Watts
- Low TCR down to $\pm 100\text{PPM}/^\circ\text{C}$
- Resistance values from 10m to 50m ohm
- Customized resistance available

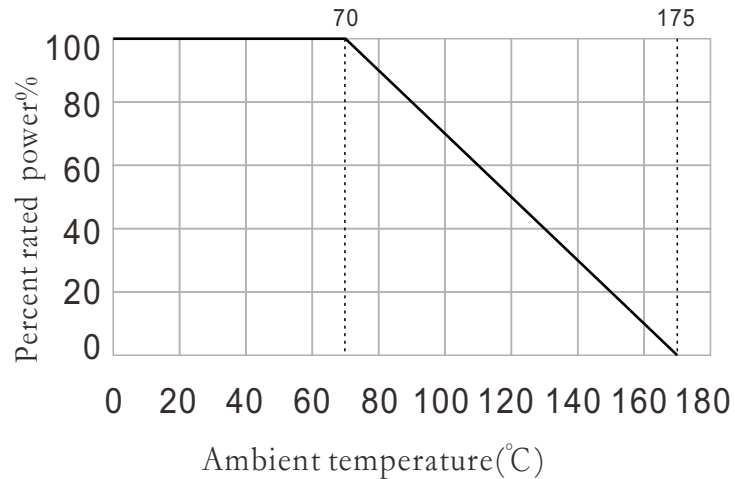
Dimensions

Type	Size (Inch)	L	W	T	D	Weight (g) (1000pcs)
LRM06	1206	3.20 ± 0.20	1.60 ± 0.20	0.60 ± 0.20	0.50 ± 0.30	18.80
LRM10	2010	5.00 ± 0.20	2.50 ± 0.20	0.60 ± 0.20	0.60 ± 0.30	40.50
LRM12	2512	6.20 ± 0.20	3.20 ± 0.20	0.60 ± 0.20	1.10 ± 0.30	90.90

Applications

- NB (for Power Management)
- MB (for Power Management)
- SWPS (DC-DC Converter, Charger, Adaptor)
- Monitor (for Power Management)

Derating Curve



Part Numbering

LRM	12	J	T	E	S	R010	R010	B
Product Type	Dimensions (LxW)	Resistance Tolerance	Packaging Code	TCR (PPM/°C)	Power Rating	Resistance	Resistance	Marking
	06:1206 10:2010 12:2512	F: $\pm 1\%$ G: $\pm 2\%$ J: $\pm 5\%$	T:Taping Reel	E: ± 100 W: ± 75	V:1/4W U:1/2W Q:3/4W T:1W A:1.5W S:2W R:3W	R010:0.01 Ω R050:0.05 Ω R100:0.10 Ω	R010:0.01 Ω R050:0.05 Ω R100:0.10 Ω	B:Black coating N:No marking

Standard Electrical Specifications

Item Type	Power Rating at 70°C	Operating Temp. Range	Resistance Range (mΩ)			TCR (PPM/°C)
			±1%	±2%	±5%	
LRM06 (1206)	1/4W 1/2W 1W	-55~+170°C	5-10			±100
			11-30			±75
LRM10 (2010)	3/4W 1W	-55~+170°C	5-10			±100
			11-30			±75
LRM12 (2512)	1W 2W	-55~+170°C	10-50			±75

High Power Rating Electrical Specifications

Item Type	Power Rating at 70°C	Operating Temp. Range	Resistance Range (mΩ)			TCR (PPM/°C)
			±1%	±2%	±5%	
LRM10 (2010)	1.5W	-55~+170°C	10-30			±75
LRM12 (2512)	1W 2W 3W	-55~+170°C	51-100			±75
			10-100			

Operating Current = $\sqrt{P/R}$, Operating Voltage = $\sqrt{P \cdot R}$

Environmental Characteristics

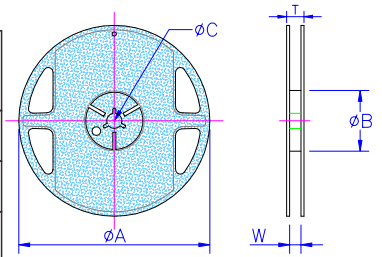
Item	Requirement	Test Method
Temperature Coefficient of Resistance (T.C.R.)	As Spec.	+25/+55/+25/+125/+25°C
Short Time Overload	± 0.5%	5*rated power for 5seconds
Endurance	As Spec.1%	70 ± 2°C, Max, working voltage for 1000 hrs with 1.5hrs "ON" and 0.5 hrs "OFF"
Dry Heat	± 1%	at +170°C for 1000 hrs
Solderability	95%min, coverage	245 ± 5°C for 3 seconds
Resistance to Soldering Heat	± 0.5%	260 ± 5°C for 10 seconds
Thermal Shock	± 0.5%	-55°C ~ 150°C, 100 cycles
Bending Strength	± 1%	Bending width 2mm once for 5 seconds
Insulation Resistance	>1GΩ	Max. overload voltage for 1 minute

Reference Standards: MIL-STD-202, JIS-C 5201-1, IEC-60115

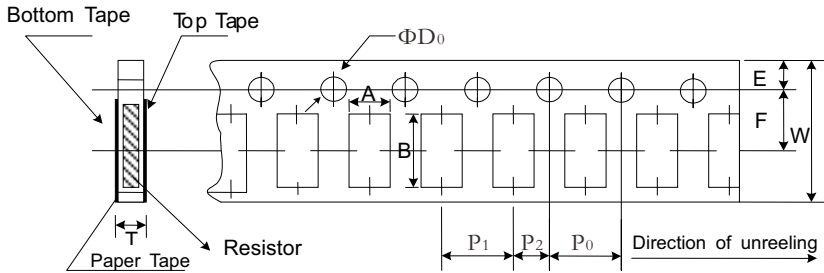
Storage Temperature: 25 ± 3°C; Humidity < 80%RH

● Packaging

Type	Packaging Quantity	Tape Width	Reel Diameter	ΦA	ΦB	ΦC	W	T	
LRM06 (1206)	Paper	5K	8mm	7 inch	178.5 ± 1.5	$60^{+1/0}$	130 ± 0.5	9.0 ± 0.5	11.5 ± 0.5
LRM10 (2010)	Embossed	4K	12mm	7 inch	178.5 ± 1.5	$60^{+1/0}$	130 ± 0.5	9.0 ± 0.5	11.5 ± 0.5
LRM12 (2512)	Embossed	4K	12mm	7 inch	178.5 ± 1.5	$60^{+1/0}$	130 ± 0.5	9.0 ± 0.5	11.5 ± 0.5



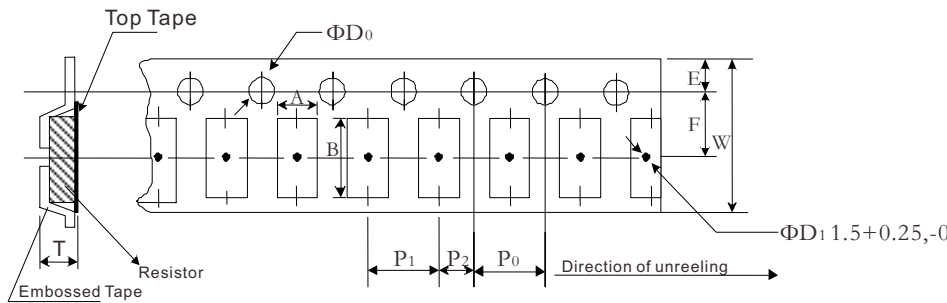
Paper Tape Specifications



Unit: mm

Type	A	B	W	E	F	P ₀	P ₁	P ₂	ΦD_0	T
LRM06	2.00 ± 0.15	3.60 ± 0.20	8.00 ± 0.20	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	$1.50 + 0.1/-0$	0.85 ± 0.10

Embossed Plastic Tape Specifications

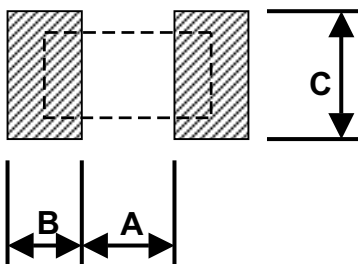


Unit: mm

Type	A	B	W	E	F	P ₀	P ₁	P ₂	ΦD_0	T
LRM10	2.80 ± 0.20	5.30 ± 0.20	12.0 ± 0.20	1.75 ± 0.10	5.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	$1.50 + 0.1/-0$	1.2^{+0}
LRM12	3.50 ± 0.10	6.70 ± 0.10	12.0 ± 0.20	1.75 ± 0.10	5.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	$1.50 + 0.1/-0$	1.2^{+0}

● Recommend Land Pattern

Unit: mm



Type	A	B	C
LRM06	1.40	1.90	1.80
LRM10	3.50	1.50	2.80
LRM12	3.80	1.60	3.50
LRM12 (High Power)	4.10	2.10	4.00