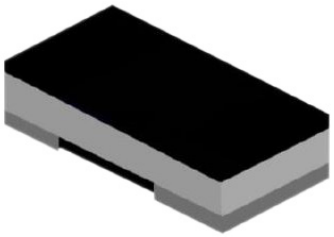
SMD Chip Resistor Jumpers

multicomp PRO

RoHS Compliant



MP000001, MP000002, MP000003
MP000006, MP000007 & MP000008

MP000004, MP000005
MP000009 & MP000010

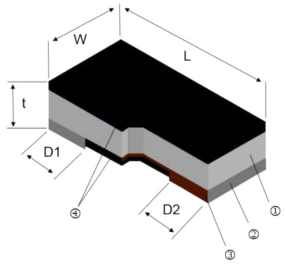
Features

- Ultra-Low resistance values Max. 0.5 mΩ
- High current application
- Metal alloy process
- Pb Free

Applications

- NB
- Mobile Device
- Server
- Electrical tools
- Power Management

Construction



1	Alumina Substrate
2	External Electrode
3	Resistor Layer
4	Overcoat
	No Marking

MP000001, MP000002, MP000003
MP000006, MP000007 & MP000008

Part Number	Size (Inch)	L (mm)	W (mm)	T (mm)	D (mm)
MP000001	0402	1 ±0.05	0.5 ±0.05	0.25 ±0.1	0.3 ±0.1
MP000002	0603	1.5 ±0.05	0.8 ±0.05	0.42 ±0.1	0.4 ±0.1
MP000003	0805	1.95 ±0.08	1.2 ±0.05	0.58 ±0.1	0.55 ±0.1
MP000006	0402	1 ±0.05	0.5 ±0.05	0.25 ±0.1	0.3 ±0.1
MP000007	0603	1.5 ±0.05	0.8 ±0.05	0.42 ±0.1	0.4 ±0.1
MP000008	0805	1.95 ±0.08	1.2 ±0.05	0.58 ±0.1	0.55 ±0.1

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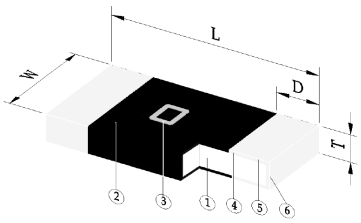
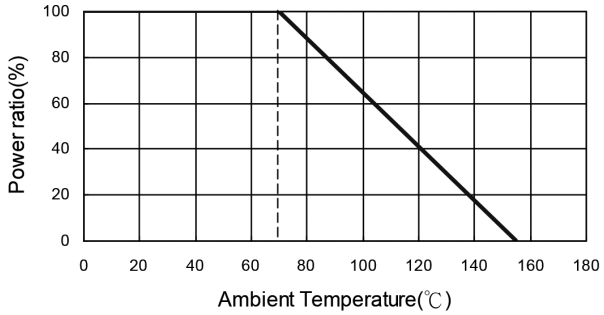


MP000004, MP000005
MP000009 & MP000010

1	Alloy Plate
2	Overcoat
3	Marking
4	Internal Electrode
5	Barrier Layer
6	Solder Plating

Part Number	Size (Inch)	L (mm)	W (mm)	T (mm)	D (mm)
MP000004	1206	3 ±0.2	1.5 ±0.2	0.5 ±0.2	0.55 ±0.2
MP000005	2010	5 ±0.2	2.5 ±0.2	0.5 ±0.2	0.75 ±0.2
MP000009	1206	3 ±0.2	1.5 ±0.2	0.5 ±0.2	0.55 ±0.2
MP000010	2010	5 ±0.2	2.5 ±0.2	0.5 ±0.2	0.75 ±0.2

Derating Curve



Electrical Specifications

Part Number	Operating Temperature Range	Resistance Range (mΩ)	Rated Current (A)
MP000001	-55°C to +155°C	0.5 Max.	20
MP000002			22.4
MP000003			31.6
MP000006			20
MP000007			22.4
MP000008			31.6
MP000004		0.2 Max.	50
MP000005			71
MP000009			50
MP000010			71

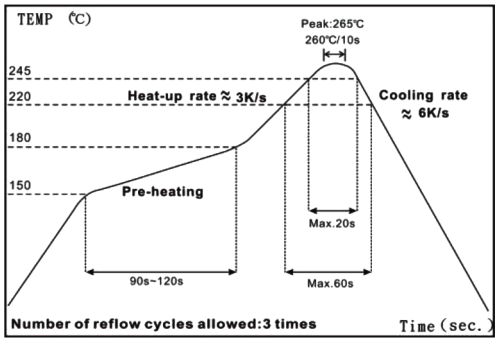
Environmental Characteristics

Item	Requirement		Test Method
	MP000001, MP000002, MP000003, MP000006, MP000007 & MP000008	MP000004, MP000005 MP000009 & MP000010	
Variation of resistance with temperature	Max. 0.5mΩ	Max. 0.2mΩ	JIS-C-5201-1 4.8 IEC-60115-1 4.8 +25/-55°C, +25/+125°C
Short Time Overload	Max. 0.5mΩ	Max. 0.2mΩ	JIS-C-5201-1 4.13 IEC-60115-1 4.13 Rated current*1.5 for 2s (MP000001, MP000002, MP000003, MP000006, MP000007 & MP000008) Rated current*2.5 for 5s (MP000001, MP000002, MP000003, MP000006, MP000007 & MP000008)
Endurance	Max. 0.5mΩ	Max. 0.2mΩ	JIS-C-5201-1 4.25 IEC-60115-1 4.25.1 70 ±2°C, Rated current for 1000 hrs with 1.5 hrs “ON” and 0.5 hrs “OFF”
Damp Heat with Load	Max. 0.5mΩ	Max. 0.2mΩ	JIS-C-5201-1 4.24 40 ±2°C, 90~95% R.H. for 1000 hrs with 1.5 hrs “ON” and 0.5 hrs “OFF”
Dry Heat	Max. 0.5mΩ	Max. 0.2mΩ	JIS-C-5201-1 4.23 IEC-60115-1 2.23.2 at +155°C for 1000 hrs
Bending Strength	Max. 0.5mΩ	Max. 0.2mΩ	JIS-C-5201-1 4.33 IEC-60115-1 4.33 Bending once for 5 seconds with 3mm
Solderability	95% min. coverage	95%min. coverage	JIS-C-5201-1 4.17 IEC-60115-1 4.17 245 ±5°C for 3 seconds
Resistance to Soldering Heat	Max. 0.5mΩ	Max. 0.2mΩ	JIS-C-5201-1 4.18 IEC-60115-1 4.18 260 ±5°C for 10 seconds
Rapid Change of Temperature	Max. 0.5mΩ	Max. 0.2mΩ	JIS-C-5201-1 4.18 IEC-60115-1 4.18 -55°C to +125°C, 5 cycles

RCWV(Rated Continuous Working Voltage)= √(P*R) or Max. Operating Voltage whichever is lower
Operating Current =√(P/R), Operating Voltage = √(P*R)

Storage Temperature: 15°C to 28°C; Humidity < 80%RH

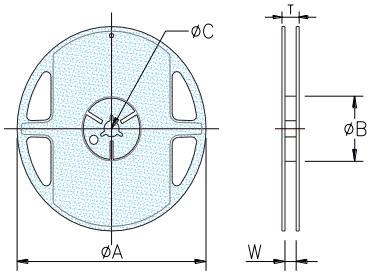
Soldering Condition



IR Reflow Soldering

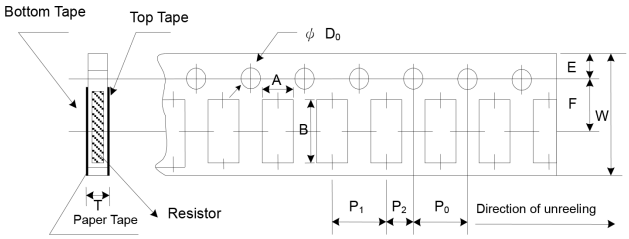
(1) Time of IR reflow soldering at maximum temperature point 260°C: 10s

Packaging



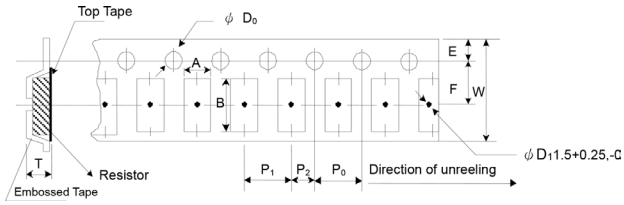
Part Number	Packaging Quantity		Tape Width	Reel Diameter	ΦA (mm)	ΦB (mm)	ΦC (mm)	W (mm)	T (mm)
MP000001	Paper	10K	8mm	7inch	178±1	60+1	13.5±0.7	9.5±1	11.5±1
MP000002	Paper	5K							
MP000003	Paper	5K							
MP000006	Paper	10K							
MP000007	Paper	5K							
MP000008	Paper	5K							
MP000004	Paper	5K			178.5±1.5	$60^{+1/-0}$	13±0.2	9±0.5	12.5±0.5
MP000005	Embossed	4K	12mm				13±0.5	13±0.5	15.5±0.5
MP000009	Paper	5K	8mm				13±0.2	9±0.5	12.5±0.5
MP000010	Embossed	4K	12mm				13±0.5	13±0.5	15.5±0.5

Paper Tape Specifications



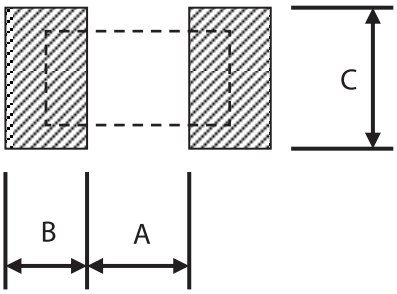
Part Number	A (mm)	B (mm)	W (mm)	E (mm)	F (mm)	P0 (mm)	P1 (mm)	P2 (mm)	ΦD0 (mm)	T (mm)
MP000001	0.7±0.05	1.16±0.05	8±0.1	1.75±0.05	3.5±0.05	4±0.1	2±0.05	2±0.05	1.55±0.05	0.45±0.1
MP000002	1.1±0.05	1.90±0.05					4±0.1			0.60±0.03
MP000003	1.63±0.05	2.4±0.05								0.75±0.05
MP000004	1.9±0.15	3.5±0.2	8±0.2	1.75±0.1			4±0.05		1.5+0.1/-0	0.85±0.1
MP000006	0.7±0.05	1.16±0.05	8±0.1	1.75±0.05			2±0.05		1.55±0.05	0.45±0.1
MP000007	1.1±0.05	1.90±0.05					4±0.1			0.60±0.03
MP000008	1.63±0.05	2.4±0.05								0.75±0.05
MP000009	1.9±0.15	3.5±0.2	8±0.2	1.75±0.1			4±0.05		1.5+0.1/-0	0.85±0.1

Embossed Plastic Tape Specifications



Part Number	A (mm)	B (mm)	W (mm)	E (mm)	F (mm)	P0 (mm)	P1 (mm)	P2 (mm)	ΦD0 (mm)	T (mm)
MP000005	2.8±0.1	5.5±0.2	12±0.3	1.75±0.1	5.5±0.05	4±0.1	4±0.1	2±0.05	1.5+0.1, -0	1.2^{+0}
MP000010										

Recommend Land Pattern



Part Number	A	B	C
MP000001	0.5	0.65	0.5
MP000002	0.5	1	0.9
MP000003	0.8	1.3	1.3
MP000004	2	0.9	1.6
MP000006	0.5	0.65	0.5

Part Number	A	B	C
MP000007	0.5	1	0.9
MP000008	0.8	1.3	1.3
MP000009	2	0.9	1.6
MP000005	3.8	0.9	2.8
MP000010			

Dimensions : Millimetres

Part Number Table

Description	Part Number
Chip Resistor, Jumper, 0402, 20A	MP000001
Chip Resistor, Jumper, 0603, 22.4A	MP000002
Chip Resistor, Jumper, 0805, 31.6A	MP000003
Chip Resistor, Jumper, 1206, 50A	MP000004
Chip Resistor, Jumper, 2010, 71A	MP000005
Chip Resistor, Jumper, 0402, 20A	MP000006
Chip Resistor, Jumper, 0603, 22.4A	MP000007
Chip Resistor, Jumper, 0805, 31.6A	MP000008
Chip Resistor, Jumper, 1206, 50A	MP000009
Chip Resistor, Jumper, 2010, 71A	MP000010