

## Type MPC Series

### Key Features

**High  
power  
density**

**Easy to  
mount**

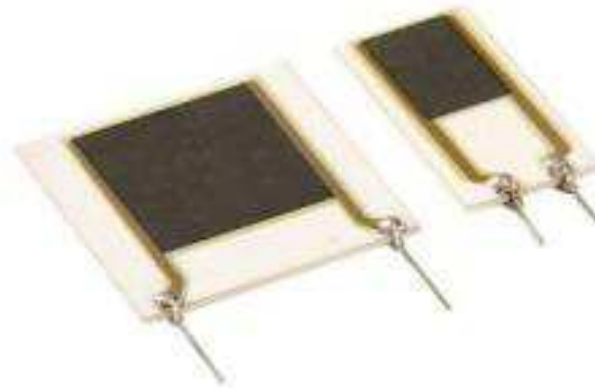
**Non  
inductive**

**Stable at  
100PPM/°C**

**Temperature  
range -55°C  
to +155°C**

**High power  
up to 10  
Watts**

**Wide range  
Of tolerances**



A range of non-inductive thick film power resistors complementing the T0220 packaged MPT series (20 Watt heat sink styles), being vertically mounted and suitable to dissipate power from 3 Watts up to 10 Watts. Available in values from 1R0 to 200K ohms they are the ideal solution for small snubber circuits, the output side of high speed pulse generators and low inductive resistor requirements in switch mode power supplies.

### Characteristics – Electrical

Power Rating @70°C	Up to 10W
Maximum Working Voltage	Up to 500V
Short Term Overload	5 x rated power for 5 seconds
Available Tolerance	0.5%, 1%, 5%
Temperature Coefficient of Resistance	±100PPM/°C
Operating Temperature Range	-55°C to +155°C

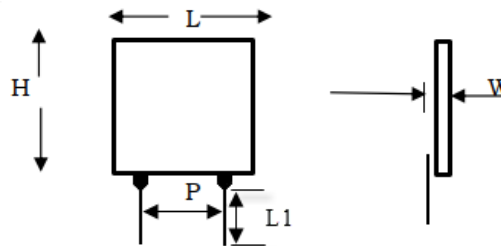
Type Item	MPC3	MPC5	MPC7	MPC10
Power Rating @70°C	3W	5W	7W	10W
Max Working Voltage	200V	300V	400V	500V
Resistance Range	1R0 ~ 200K			

### Environmental Characteristics

Characteristics	Method	Standards
Short Term Overload	5 x Rated Power – 5 Sec	$\Delta R \pm (1.0\% + 0.05 \text{ Ohms})$
Load Life	Rated 1000 Hrs 1.5/0.5 Hr ON/OFF	$\Delta R \pm (2.0\% + 0.05 \text{ Ohms})$
Temperature Cycling	-55 /+155, 5 cycles	$\Delta R \pm (0.5\% + 0.05 \text{ Ohms})$
Insulation Resistance	At 500V for 1 Min	Shall not be less than 10,000 M Ohms
Dielectric Test		No Flash over at 5KV
Resistance Soldering Heat	260°C 10 sec	$\Delta R \pm (0.5\% + 0.05 \text{ Ohms})$
Solderability	Solder bath dip – 5 Sec	Greater than 95% Coverage
Resistance to Solvents	Solvent dip – 3 Min	$\Delta R \pm (0.5\% + 0.05 \text{ Ohms})$
Damp Heat Steady State	40°C/95% Rh – 56 days	$\Delta R \pm (0.5\% + 0.05 \text{ Ohms})$
Terminal Strength	Bending, Tensile, Torsion	No Mechanical Damage

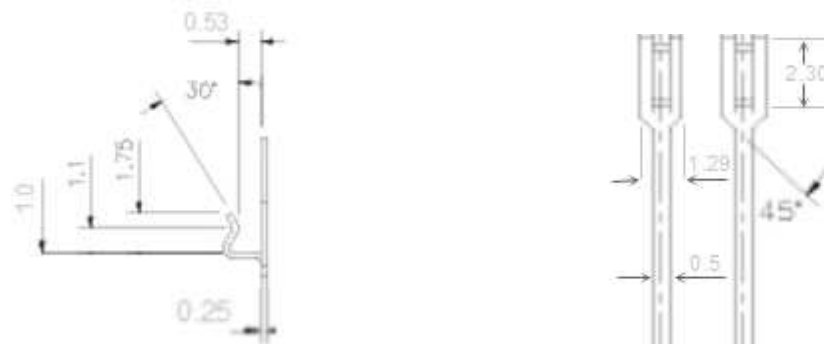
Reference Standards:

### Dimensions

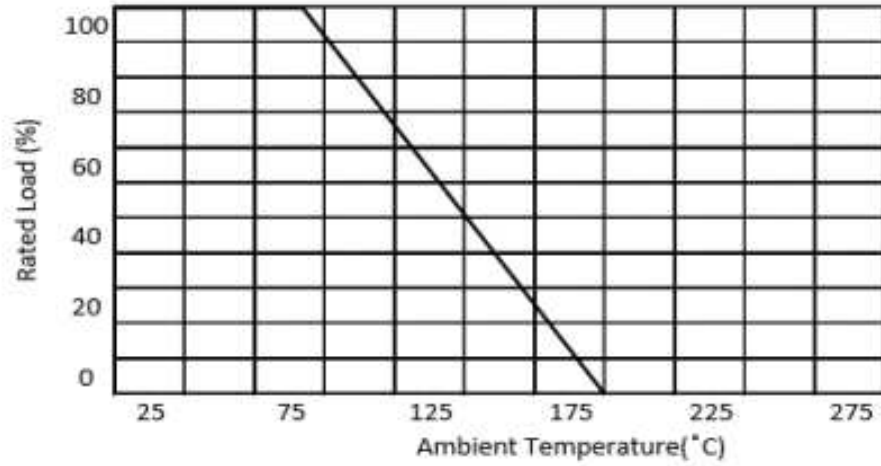


Type	L±0.13	H±0.13	W±0.05	P±0.38	L1	Unit Weight g/pc
MPC3	10.16	25.4	2.50	5.08	3.175	1.12
MPC5	12.7	25.4	2.50	5.08	3.175	1.3
MPC7	19.05	25.4	2.50	12.7	3.175	1.8
MPC10	25.4	25.4	2.50	20.32	3.175	2.6

### Terminal pin detail



**Derating Curve**



**Packaging**

**MPC3 and MPC5**

50 pcs per tray, 20 trays = 1000pcs

0	0	0	0	0	0	0	0	0	0	0	0
0	1	1	1	1	1	1	1	1	1	1	0
0	1	1	1	1	1	1	1	1	1	1	0
0	1	1	1	1	1	1	1	1	1	1	0
0	1	1	1	1	1	1	1	1	1	1	0
0	1	1	1	1	1	1	1	1	1	1	0
0	0	0	0	0	0	0	0	0	0	0	0



**MPC7**

35 pcs per tray, 29 trays = 1015pcs

0	0	0	0	0	0	0	0	0
0	1	1	1	1	1	1	1	0
0	1	1	1	1	1	1	1	0
0	1	1	1	1	1	1	1	0
0	1	1	1	1	1	1	1	0
0	1	1	1	1	1	1	1	0
0	0	0	0	0	0	0	0	0

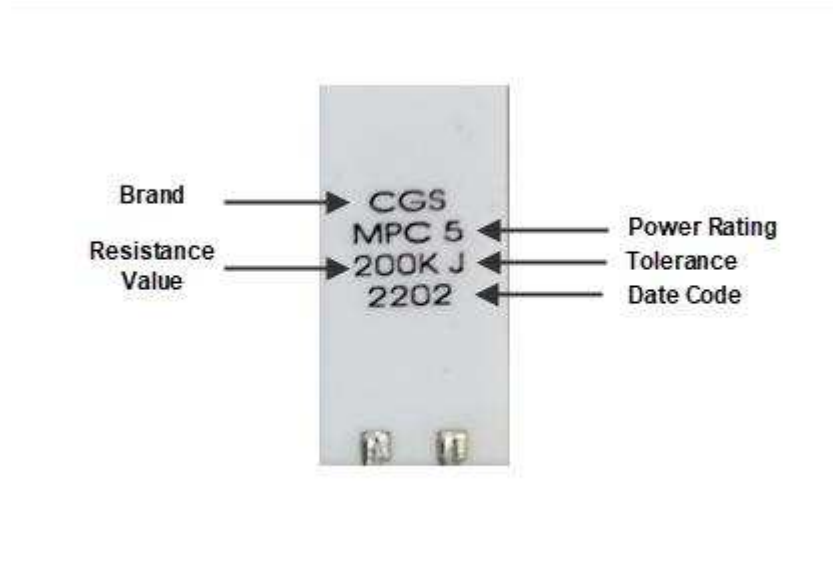
**MPC10**

42 pcs per tray, 24 trays = 1008pcs

1	1	1	1	1	1
1	1	1	1	1	1
1	1	1	1	1	1
1	1	1	1	1	1
1	1	1	1	1	1
1	1	1	1	1	1
1	1	1	1	1	1

## Marking

Marking is on the rear of component



## How To Order

MPC	52	1K0	J
Common Part	Power Rating/Size	Resistance Value	Tolerance
MPC – Thick Film Planar Resistance	32 – 3 Watts	1 ohm (1000 milliohms) 1R0	D ±0.5%
	52 – 5 Watts	1K ohm (1000 ohm) 1K0	F ±1%
	75 – 7 Watts	100K ohm (100,000 ohm) 100K	J ±5%
	108 – 10 Watts		

While TE has made every reasonable effort to ensure the accuracy of the information in this data sheet, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. TE reserves the right to make any adjustments to the information contained herein at any time without notice. TE expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions in this data sheet are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult TE for the latest dimensions and design specifications.