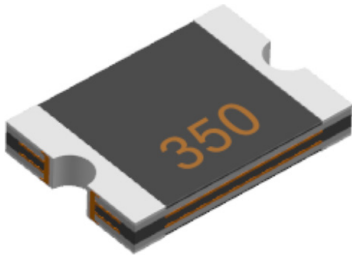


Resettable PPTC Fuses - 1812 **multicomp**PRO

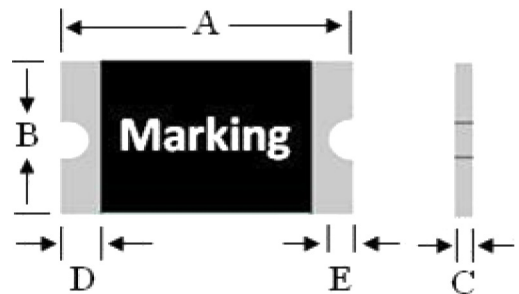
**RoHS
Compliant**



Features

- Fast tripping, 1812 Size
- Surface mountable, Solid state
- Holding Current: 3A to 7.5A, @25°C
- Maximum Voltage: 12V
- Operating Temperature: -40°C to +85°C
- Agency Approvals: UL E345393, TUV R50450107

Dimensions : Millimetres



Part NO.	Marking	A		B		C		D	E
		Min	Max	Min	Max	Min	Max	Min	Min
MP005240	300L	4.37	4.73	3.07	3.41	0.3	0.7	0.3	0.15
MP005241	500					0.4	1.1		
MP005242	750								

Electrical Specifications

Part NO.	V _{MAX} (V)	I _{MAX} (A)	I _H (A)	I _T (A)	P _D (W)	Maximum Time-to-Trip		Resistance	
						Current	Time	R _{MIN}	R _{1MAX}
						(A)	(Sec)	(Ω)	(Ω)
MP005240	12	50	3	6	1.2	15	2	0.0035	0.022
MP005241			5	10		25		0.0015	0.014
MP005242			7.5	15		37.5		0.0008	0.008

Thermal Derating Chart-I_H (A)

Part NO.	Maximum holding current at assigned ambient temperature (A)								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
MP005240	4.35	3.9	3.51	3	2.58	2.31	2.07	1.86	1.5
MP005241	7.26	6.5	5.84	5	4.29	3.84	3.45	3.11	2.5
MP005242	10.89	9.75	8.76	7.5	6.44	5.76	5.18	4.66	3.75

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Physical Characteristics

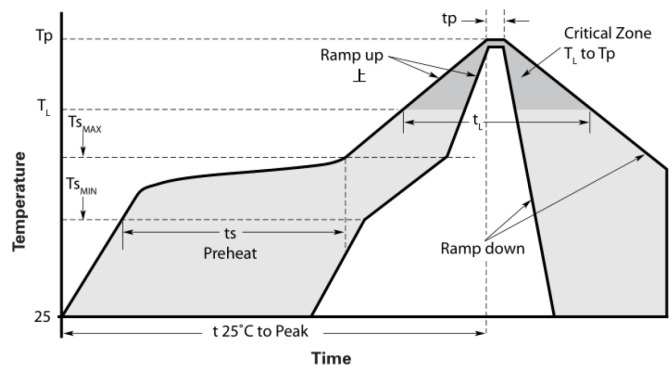
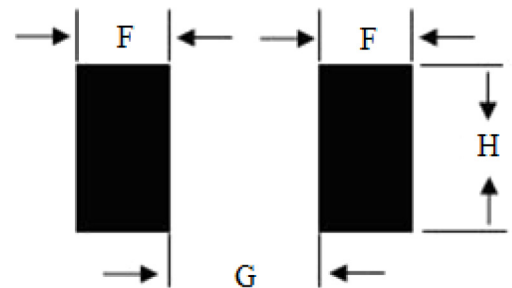
Terminal Pad Materials	Tin-Plated Nickle-copper
Soldering Characteristics	EIA Specification RS 186-9E, ANSI/J-STD-002
Moisture Sensitivity	Level 2a, per IPC/JEDEC J-STD 020C

Test Procedures And Requirements

Test Item	Test Conditions	Accept/Reject Criteria
Initial Resistance	In still air at 25°C	$R_{MIN} \leq R \leq R_{1MAX}$
Time to Trip	Specified current V_{MAX} , 25°C	$t \leq$ Maximum Time to Trip
Holding Current	1 hour at I_H , 25°C	No trip
Trip Endurance	V_{MAX} , I_{MAX} , 1 hour	No arcing or burning

Solder Reflow Profiles And Pad Layout Dimensions

Solder pad layout Dimensions (mm)			
Normal Value	F	G	H
	1.78	3.45	3.2
Profile Feature	Pb-Free		
Average ramp up rate ($T_{S_{MAX}}$ to T_p) 3°C/ max.			
Preheat			
<ul style="list-style-type: none"> Temperature min ($T_{S_{MIN}}$) 150°C Temperature max ($T_{S_{MAX}}$) 200°C Time ($t_{S_{MIN}}$ to $t_{S_{MAX}}$) 60 to 120 seconds 			
Time maintained above			
<ul style="list-style-type: none"> Temperature (T_L) 217°C Time (t_L) 60 to 150 seconds 			
Peak/Classification temperature (T_P) 260°C			
Time within 5°C of actual peak temperature			
Time (t_P) 30 seconds max			
Ramp down rate 3°C/second max			
Time 25°C to peak temperature 8 minutes max			



Recommended reflow methods: IR, hot air oven, N2 environment for lead-free.
 Devices are not designed to be wave soldered to the bottom side of the board.
 Recommended maximum paste thickness is 0.25mm (0.01inch).
 Devices can be cleaned using standard industry methods and aqueous solvents.
 Devices can be reworked using the standard industry practices .Please also avoid direct contact to the device.
 If reflow temperature exceed the recommended profile, devices may not meet the performance requirements.

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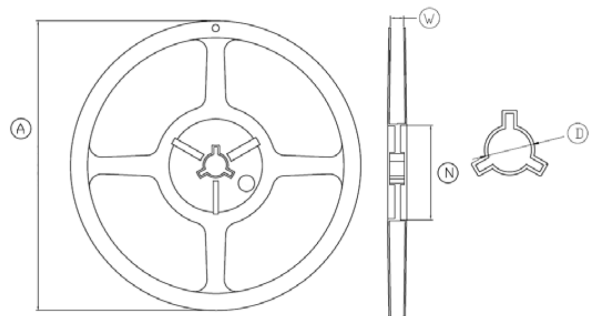
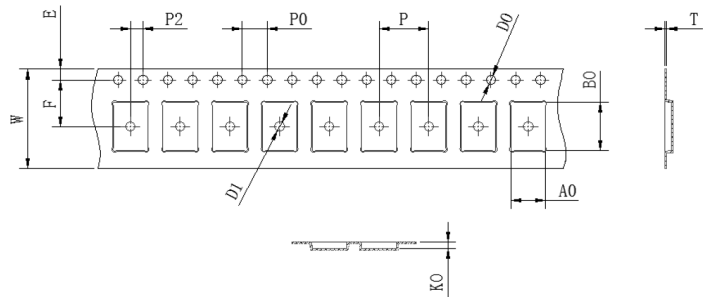
Packing Information

Tape Specifications

W	12 ±0.2
P0	4 ±0.1
P1	8 ±0.1
P2	2 ±0.05
A0	3.66 ±0.1
B0	4.98 ±0.1
D0	1.5 +0.1/-0
D1	1.5 ±0.1
F	5.5 ±0.1
E	1.75 ±0.1
T	0.20 ±0.05
	0.25 ±0.05
K0	0.95 ±0.1
	1.50 ±0.1

Reel Dimensions

A	178 ±1
D	13.3 ±0.3
W	13.5 ±1
N	59 ±1



Storage

The maximum ambient temperature shall not exceed 40°C. Storage temperatures higher than 40°C could result in the deformation of packaging materials. The maximum relative humidity recommended for storage is 70%. High humidity with high temperature can accelerate the oxidation of the solder plating on the termination and reduce the solderability of the components. Sealed plastic bags with desiccant shall be used to reduce the oxidation of the termination and shall only be opened prior to use.

Warning

- Use PPTC beyond the maximum ratings or improper use may result in device damage, electrical arcing and flame.
- PPTC are intended for protection against occasional over current or over temperature fault conditions and should not be used when repeated fault conditions or prolonged trip events are anticipated.
- Use PPTC with a large inductance in circuit will generate a circuit voltage above the rated voltage of the PPTC.
- Avoid impact PPTC device its thermal expansion like placed under pressure or installed in limited space.
- Contamination of the PPTC material with certain silicon based oils or some aggressive solvents can adversely impact the performance of the devices.
- Users should independently evaluate the suitability of the product and test each product selected for their own application.

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