Description

JPET Radial-Leaded PTC Devices represent the most comprehensive and complete set of PTC products available in the industry today. So they are widely used in industry, consumer, and automotive electronics applications.

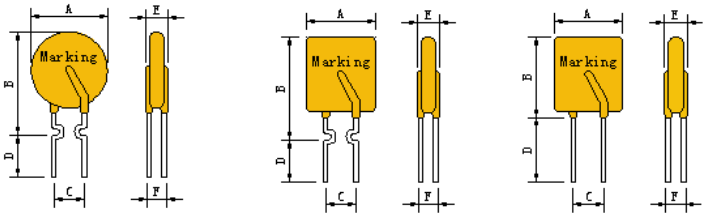
Features

- Radial leaded devices
- Overcurrent protection devices
- Cured, flame retardant epoxy polymer insulating material meets UL94 V-0 requirements
- RoHS compliant and Lead-free
- Agency recognition: UL

Applications

- Power supplies
- Motor protection
- Automotive electronics
- Security system
- Computers& peripherals
- USB hubs, ports and peripherals
- ISDN and xDSL equipment
- LAN/WAN and VoIP cards

Product Dimensions(mm)



Style 1 Style 2 Style 3

***Lead materials:** Tin-plate metal wire

Part number	A	B	C	D	E	F	Lead	
	Max.	Max.	Typ.	Min.	Max.	Typ.	Style	Size(Φ)
MPG075	6.4	11.4	5.1	7.6	3.0	0.8	1	0.6
MPG090	6.6	14.0	5.1	7.6	3.0	0.9	2	0.6
MPG110	7.9	14.2	5.1	7.6	3.0	0.9	2	0.6
MPG120	6.9	11.7	5.1	7.6	3.0	0.8	1	0.6
MPG135	8.9	14.5	5.1	7.6	3.0	0.9	2	0.6
MPG155	6.9	11.7	5.1	7.6	3.0	0.9	1	0.6
MPG160	8.9	17.9	5.1	7.6	3.0	0.9	2	0.6
MPG185	10.7	16.7	5.1	7.6	3.0	0.9	2	0.6
MPG250	11.5	20.4	5.1	7.6	3.0	0.9	2	0.6
MPG300	7.8	11.7	5.1	7.6	3.0	1.2	3	0.8
MPG400	9.6	13.8	5.1	7.6	3.0	1.2	3	0.8
MPG500	11.1	13.9	5.1	7.6	3.0	1.2	3	0.8
MPG600	11.4	16.8	5.1	7.6	3.0	1.2	3	0.8
MPG700	11.9	19.7	5.1	7.6	3.0	1.2	3	0.8
MPG800	13.4	21.2	5.1	7.6	3.0	1.2	3	0.8
MPG900	14.7	21.4	5.1	7.6	3.0	1.2	3	0.8
MPG1000	17.2	24.8	5.1	7.6	3.0	1.2	3	0.8
MPG1100	18.2	26.7	5.1	7.6	3.0	1.2	3	0.8
MPG1200	18.2	28.5	10.2	7.6	3.6	1.4	3	1.0
MPG1400	28.6	28.7	10.2	7.6	3.4	1.4	3	1.0

Electrical Characteristics

Part number	I_H (A)	I_T (A)	V_{max} (V)	I_{max} (A)	Pd_{typ} (W)	Max. Time-to-trip (A)	(S)	R_{min} (Ω)	R_{max} (Ω)	R_{1max} (Ω)
MPG075	0.75	1.30	16	100	0.30	8.0	0.4	0.110	0.175	0.230
MPG090	0.90	1.80	16	100	0.60	8.0	1.2	0.070	0.120	0.180
MPG110	1.10	2.20	16	100	0.70	8.0	2.3	0.050	0.095	0.140
MPG120	1.20	2.00	16	100	0.60	8.0	3.5	0.045	0.100	0.140
MPG135	1.35	2.70	16	100	0.81	8.0	4.5	0.040	0.074	0.112
MPG155	1.55	2.65	16	100	0.81	8.0	5.0	0.030	0.705	0.110
MPG160	1.60	3.20	16	100	0.90	8.0	5.0	0.030	0.061	0.110
MPG185	1.85	3.70	16	100	1.00	8.0	5.0	0.030	0.051	0.090
MPG250	2.50	5.00	16	100	1.21	12.5	5.0	0.0220	0.0350	0.0530
MPG300	3.0	5.1	16	100	2.3	15.0	1.0	0.0340	0.0645	0.0975
MPG400	4.0	6.8	16	100	2.4	20.0	1.7	0.0200	0.0390	0.0600
MPG500	5.0	8.5	16	100	2.6	25.0	2.0	0.0150	0.0240	0.0340
MPG600	6.0	10.2	16	100	2.8	30.0	3.3	0.0100	0.0190	0.0280
MPG700	7.0	11.9	16	100	3.0	35.0	3.5	0.0070	0.0131	0.0200
MPG800	8.0	13.6	16	100	3.0	40.0	5.0	0.0050	0.0110	0.0175
MPG900	9.0	15.3	16	100	3.3	45.0	5.5	0.0040	0.0091	0.0135
MPG1000	10.0	17.0	16	100	3.3	50.0	6.0	0.0035	0.0070	0.0102
MPG1100	11.0	18.7	16	100	3.7	55.0	7.0	0.0030	0.0060	0.0089
MPG1200	12.0	20.4	16	100	4.2	60.0	7.5	0.0030	0.0057	0.0086
MPG1400	14.0	23.8	16	100	4.6	70.0	9.0	0.0020	0.0043	0.0064

I_H= Hold current: maximum current at which the device will not trip at 25℃ still air.

I_T= Trip current: minimum current at which the device will always trip at 25℃ still air.

V_{max}= Maximum interrupt voltage device can withstand without damage at rated current.

I_{max}= Maximum fault current device can withstand without damage at rated voltage.

Pd_{typ}= Typical power dissipation: typical amount of power dissipated by the device when in state air environment.
R_{min}= Minimum device resistance at 25℃ prior to tripping.
R_{max}=Maximum device resistance at 25℃ prior to tripping.
R_{1max}= Maximum resistance of device at 25℃ measured one hour after tripping.

Thermal Derating [Rated Hold Current (A) at Ambient Temperature (℃)]

Part number	Maximum ambient operating temperatures(℃)								
	-40	-20	0	25	40	50	60	70	85
MPG075	1.00	0.90	0.80	0.75	0.70	0.6	0.55	0.50	0.43
MPG090	1.40	1.25	1.10	0.90	0.75	0.69	0.65	0.60	0.50
MPG110	1.75	1.52	1.33	1.10	0.99	0.90	0.80	0.73	0.63
MPG120	1.69	1.52	1.36	1.20	1.04	0.96	0.88	0.80	0.68
MPG135	2.15	1.94	1.70	1.35	1.20	1.14	1.00	0.90	0.81
MPG155	2.17	1.96	1.75	1.55	1.34	1.24	1.13	1.08	0.88
MPG160	2.3	2.1	1.8	1.60	1.4	1.3	1.2	1.0	0.9
MPG185	2.6	2.4	2.1	1.85	1.6	1.4	1.3	1.1	1.0
MPG250	3.7	3.3	3.0	2.5	2.2	2.0	1.8	1.6	1.3
MPG300	4.4	4.0	3.6	3.0	2.6	2.4	2.1	1.9	1.4
MPG400	5.9	5.3	4.8	4.0	3.5	3.2	2.8	2.5	1.9
MPG500	7.3	6.6	6.0	5.0	4.4	4.0	3.6	3.1	2.4
MPG600	8.8	8.0	7.2	6.0	5.2	4.8	4.2	3.8	2.8
MPG700	10.3	9.3	8.4	7.0	6.2	5.6	5.0	4.4	3.3
MPG800	11.7	10.7	9.6	8.0	6.9	6.4	5.6	5.1	3.7
MPG900	13.2	11.9	10.7	9.0	7.9	7.2	6.4	5.6	4.2
MPG1000	14.7	13.3	12.0	10.0	8.7	8.0	7.0	6.3	4.7
MPG1100	16.1	14.6	13.1	11.0	9.7	8.8	7.8	6.9	5.2
MPG1200	17.6	16.0	14.4	12.0	10.4	9.6	8.4	7.6	5.6
MPG1400	20.5	18.7	16.8	14.0	12.1	11.2	9.8	8.9	6.5

Test Procedures And Requirements

Test	Test Conditions	Accept/Reject Criteria
Resistance	In still air @ 25℃	$R_{min} \leqslant R \leqslant R_{max}$
Time to Trip(T_{trip})	Specified current, V_{max}, In still air @ 25℃	T≤maximum Time to Trip
Hold Current(I_H)	30min, at I_H, In still air @ 25℃	No trip
Trip Cycle Life	V_{max}, I_{max}, 100cycles, In still air @ 25℃	No arcing or burning
Trip Endurance	V_{max}, 60 minutes, In still air @ 25℃	No arcing or burning

Marking System

Package Information

Bulk:

MPG075~MPG1400…….1000pcs per bag

Tape & Reel:

MPG075~MPG250…….3000pcs per reel

MPG300~MPG1400…… ……1500pcs per reel

Storage Condition

The ambient temperature is -40℃~40℃, the maximum relative humidity recommended is 70%RH.

Notices: Specifications are subject to change without notice.

WARNING:

The devices are intended for protection against occasional overcurrent or overtemperature fault conditions and should not be used when repeated fault conditions are anticipated. Operation beyond maximum ratings or improper use may result in device damage and possible electrical arcing and flame.
Polymeric thermistors operate by thermal expansion of the conductive polymer. If devices are placed under pressure or installed in spaces that would prevent thermal expansion, they may not properly protect against fault conditions. Designs must be selected in such a manner that adequate space is maintained over the life of the product.
Twisting, bending, or placing the Polymeric thermistors in tension will decrease the ability of the device to protect against electrical faults. No residual force should remain on the device after installation. Mechanical damage to Polymeric thermistors chip may affect device performance and should be avoided.
Chemical contamination of Polymeric thermistors should be avoided. Certain greases, solvents, hydraulic fluids, fuels, industrial cleaning agents, volatile components of adhesives, silicones, and electrolytes can have an adverse effect on device performance.
Environmental conditions must not harm the thermistors. Use thermistors only in normal atmospheric conditions. Avoid use in deoxidizing gases, corrosive agents, humid or salty conditions. Contact with any liquids and solvents should be prevented.
Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal, and mechanical procedures for electronic components.