Polymer PTC Resettable 250V Series

Features:

- Radial leaded Devices
- Cured，flame retardant epoxy polymer insulating material meets UL94V-0 requirements
- Rohs compliant and lead-free

Product Dimensions

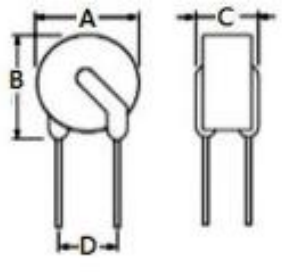


Fig1

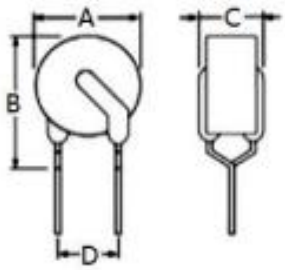


Fig2

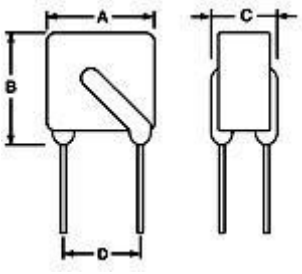


Fig3

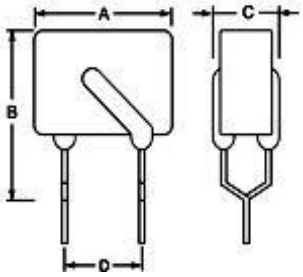


Fig4

Unit ： mm

Model	Dimensions（mm）				Lead material	Shape
	A(max)	B(max)	C(max)	D(typ)	Tinned matel(mm)	Fig
250V-020	7.4	12.7	4.5	5.1	22AWG/Φ0.6	1
250V-030	7.4	12.7	4.5	5.1	22AWG/Φ0.6	1
250V-040	7.4	12.7	4.5	5.1	22AWG/Φ0.6	1/2
250V-050	7.4	12.7	4.5	5.1	22AWG/Φ0.6	1/2
250V-060	7.4	12.7	4.5	5.1	22AWG/Φ0.6	1/2
250V-080	7.4	12.7	4.5	5.1	22AWG/Φ0.6	2
250V-090	7.4	12.7	4.5	5.1	22AWG/Φ0.6	2
250V-100	7.8	12.6	4.5	5.1	22AWG/Φ0.6	1
250V-110	7.0	12.6	4.5	5.1	22AWG/Φ0.6	4
250V-120	7.0	12.6	4.5	5.1	22AWG/Φ0.6	4
250V-145	7.0	12.6	4.5	5.1	22AWG/Φ0.6	4
250V-180	10.2	14.5	3.8	5.1	22AWG/Φ0.6	2
250V-200	12.0	17.0	4.5	5.1	22AWG/Φ0.6	3
250V-400	12.0	17.0	4.5	5.1	22AWG/Φ0.6	3
250V-600	16.0	18.0	4.5	5.1	22AWG/Φ0.6	3
250V-800	20.0	22.5	4.5	5.1	20 AWG/Φ0.8	3
250V-1000	20	22.5	4.5	5.1	20 AWG/Φ0.8	3
250V-1200	22	28	4.5	5.1	20 AWG/Φ0.8	3
250V-1500	25	30	4.5	5.1	20 AWG/Φ0.8	3
250V-2000	26	32	4.5	10.2	20 AWG/Φ0.8	3

Note: ① Dimensions A, B, C is the maximum size, D values are typical tolerance of ± 0.75mm

Thermal Derating Chart-IH（A）

Model	Maximum ambient operating temperatures（℃）								
	-40	-20	0	25	40	50	60	70	85
250V-020	0.030	0.026	0.023	0.020	0.017	0.015	0.014	0.012	0.009
250V-030	0.044	0.040	0.035	0.030	0.026	0.023	0.020	0.018	0.014
250V-040	0.059	0.053	0.047	0.040	0.034	0.031	0.027	0.024	0.018
250V-050	0.074	0.066	0.059	0.050	0.043	0.039	0.034	0.031	0.023
250V-060	0.089	0.079	0.070	0.060	0.051	0.046	0.041	0.037	0.027
250V-080	0.118	0.106	0.094	0.080	0.068	0.062	0.054	0.049	0.036
250V-090	0.133	0.119.	0.105	0.090	0.077	0.069	0.061	0.055	0.041
250V-100	0.148	0.132	0.117	0.100	0.085	0.077	0.068	0.061	0.045
250V-110	0.163	0.145	0.129	0.110	0.094	0.085	0.075	0.067	0.050
250V-120	0.178	0.158	0.140	0.120	0.102	0.092	0.082	0.073	0.054
250V-145	0.215	0.191	0.170	0.145	0.123	0.112	0.099	0.088	0.064
250V-180	0.266	0.238	0.211	0.180	0.153	0.139	0.122	0.110	0.081
250V-200	0.296	0.264	0.234	0.200	0.170	0.154	0.136	0.122	0.090
250V-400	0.592	0.528	0.468	0.400	0.340	0.308	0.272	0.244	0.180
250V-600	0.888	0.792	0.702	0.600	0.510	0.462	0.408	0.366	0.270
250V-800	1.184	1.056	0.936	0.800	0.680	0.616	0.544	0.488	0.360
250V-1000	1.480	1.320	1.170	1.000	0.850	0.770	0.680	0.610	0.450
250V-1200	1.776	1.584	1.404	1.200	1.020	0.924	0.816	0.732	0.540
250V-1500	2.220	1.980	1.755	1.500	1.275	1.155	1.020	0.915	0.675
250V-2000	2.960	2.640	2.340	2.000	1.700	1.540	0.360	1.220	0.900

Electrical Characteristic

Model	I_{Hold}	I_{Trip}	V_{max}	I_{max}	$P_{d\ Max}$	Maximum Time to Trip		Nominal resistance（Ω）	
	(mA)	(mA)	$V_{(DC)}$	A	W	Current（A）	Time（S）	R_{min}	R_{max}
250V-020	20	45	250	3	1.0	0.5	0.5	80	160
250V-030	30	65	250	3	1.0	0.5	0.5	60	120
250V-040	40	80	250	3	1.0	0.5	1.5	30	60
250V-050	50	100	250	3	1.0	0.5	2	25	50
250V-060	60	120	250	3	1.0	0.5	2	20	60
250V-080	80	160	250	3	1.0	1	0.5	12	22
250V-090	90	180	250	3	1.0	1	0.8	10	20
250V-100	100	200	250	3	1.0	1	1	10	20
250V-110	110	220	250	3	1.0	1	2.0	6	12
250V-120	120	240	250	3	1.0	1	2.0	6	11
250V-145	145	290	250	3	1.0	1	5.0	3.5	6.5
250V-180	180	650	250	3	1.8	3	3.0	1.0	2.2
250V-200	200	400	250	5	2.4	3	5	3	6

250V-400	400	800	250	5	2.8	3	8	1	3
250V-600	600	1200	250	5	3.2	3	12	0.6	2.0
250V-800	800	1600	250	5	3.6	4	18	0.4	1.0
250V-1000	1000	2000	250	7	3.6	5	20	0.3	0.8
250V-1200	1200	2400	250	7	3.6	6	20	0.2	0.8
250V-1500	1500	3000	250	7	4.8	7.5	20	0.2	0.6
250V-2000	2000	4000	250	10	4.8	10	20	0.2	0.4

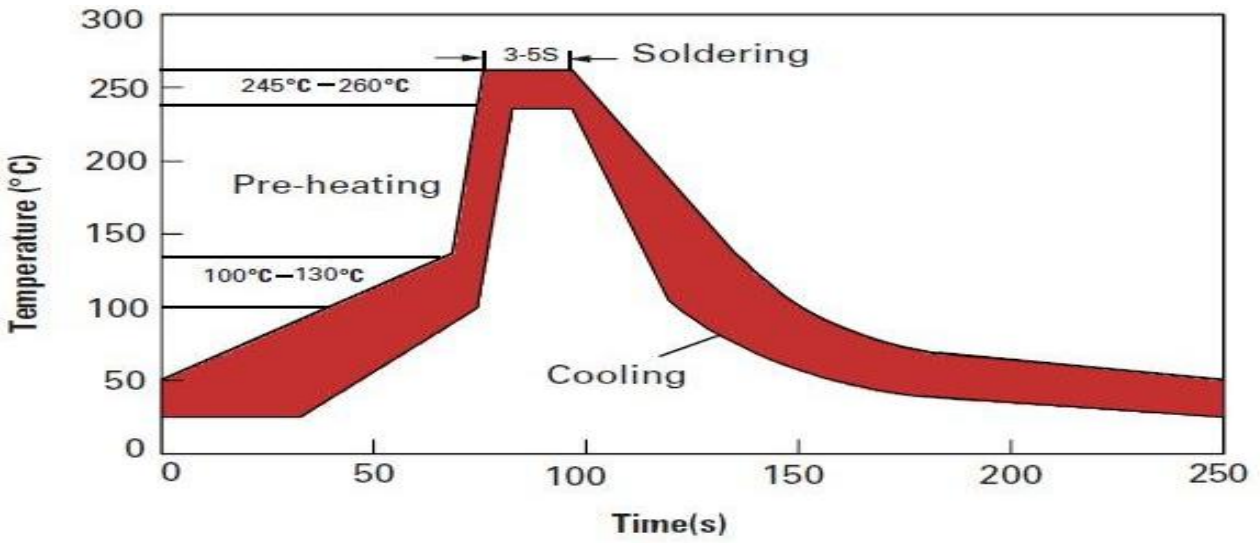
Test Procedures And Requirements

Test	Test Conditions	Accept/Reject Criteria
Resistance	In still air @ 25℃	$R_{min} \leq R \leq R_{max}$
Time to Trip	Specified current，V_{max}，25℃	$T_{maximum}$ Time to Trip
Hold Current	60min，at IH	No trip
Trip Cycle Life	V_{max}，I_{max}，100cycles	No arcing or burning
Trip Endurance	V_{max}，24hours	No arcing or burning

Physical Characteristics and Environmental Specifications

Test	Conditions	Resistance change
Passive aging	+85℃，1000hrs	±8% typical
Humidity aging	+85℃，85%R.H.1000hrs	±8% typical
Thermal shock	+125℃ to -55℃，10times	±12% typical
Resistance to solvent	MIL-STD-202，Method 215	No change
Vibration	MIL-STD-202，Method 201	No change

Solder reflow conditions



recommended curve

1. Ambient temperature: -40℃～85℃
2. Humidity: ≤95%HR(40℃)
3. Atmospheric pressure: 86Kpa ~106Kpa.
4 .Vibration frequency: 10Hz ~ 50Hz.
5. Acceleration: 98m/s2.
6. Storage temperature: -40℃~85℃.
7.Soldering
   7.1 Wave Soldering:
   Soldering Temperature:260℃~270℃
   Soldering Time:≤3sec.
   Soldering Position: Resettable fuse wire and the bottom ≥ 6mm。
   7.2 Manual soldering
   Soldering Temperature:250℃~280℃
   Soldering Time: ≤3sec.
   Soldering Position: Resettable fuse wire and the bottom ≥ 6mm。

Electrical Specifications:

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 nalways at 25℃ still air.
V_{max}=Maximum voltage device can withstand without damage at rated current.
I_{max}=Maximum fault current device can withstand tithout damage at rated voltage.
T_{trip}=Maximum time to trip(s) at assigned current.
P_d=Typical power dissipation:typical amount of power dissipated by the decice 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.

Warning:

PPTC devices are intended for protection against occasional over-current or over-temperature fault conditions,and should not be used when repeated fault conditions are anticipated.Operation beyond maximum tatings of improper use may result in device damage and possible electrical arcing and flame.

Notes:

The specification is intended to present application,product and technical data to assist the user in selecting PPTC circuit production devices,However,users should imdependently evaluate and test the suitability of each product.YINT makes on warranties as to the acduracy or completeness of the information and disclaims any liatility resulting form its use,YINT's only obligations are those im the YINT Standard Rerms and Conditions of Sale and in no case will YINT be liable for any incidental,imdirect,or consequential damages arising from the sale,resale,or misues of its products.YINT reserves the right to change of update,without notice,any information contained in this specification.