

Polymer PTC Resettable 60V Series

Features:

- RoHS Compliant & Halogen Free
- Radial leaded Devices
- Cured, flame retardant epoxy polymer insulating material meets UL94V-0 requirements
- Operation Current: 0.05A~5A , Maximum Voltage: 60Vdc, Operating Temperature: -40°C TO 85°C

Product Dimensions

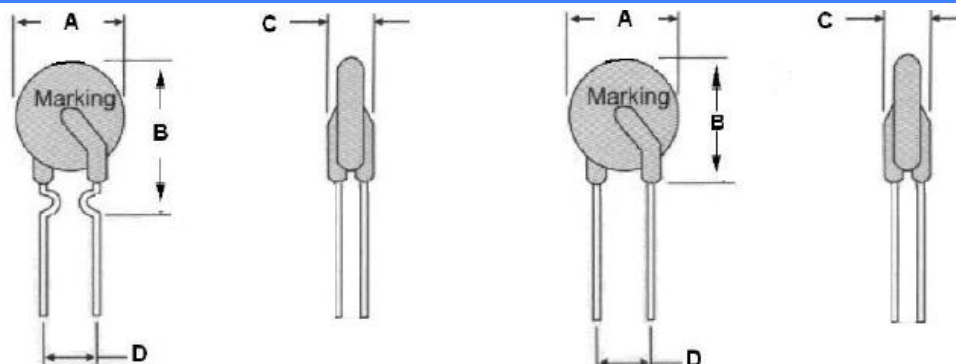


Fig1

Fig2

Unit : mm

Model	Dimensions (mm)				Lead material	Shape
	A(max)	B(max)	C(max)	D(typ)	Tinned matel(mm)	Fig
60V-005	5.0	8.5	3.0	5.1	24AWG/Φ0.5	1
60V-010	5.5	9.5	3.0	5.1	24AWG/Φ0.5	1
60V-017	7.4	12.7	3.0	5.1	24AWG/Φ0.5	1
60V-020	7.4	12.7	3.0	5.1	24AWG/Φ0.5	1
60V-025	7.4	12.7	3.0	5.1	24AWG/Φ0.5	1
60V-030	7.4	13.0	3.0	5.1	24AWG/Φ0.5	1
60V-040	7.8	16.2	3.0	5.1	24AWG/Φ0.5	1
60V-050	7.8	16.2	3.0	5.1	24AWG/Φ0.5	1
60V-065	9.7	17.8	3.0	5.1	22AWG/Φ0.6	1
60V-075	10.4	18.4	3.0	5.1	22AWG/Φ0.6	1
60V-090	11.7	18.4	3.0	5.1	22AWG/Φ0.6	1
60V-110	13.0	18.0	3.0	5.1	20 AWG/Φ0.8	2
60V-135	14.5	19.6	3.0	5.1	20 AWG/Φ0.8	2
60V-160	16.3	21.3	3.0	5.1	20 AWG/Φ0.8	2
60V-185	17.8	22.9	3.0	5.1	20 AWG/Φ0.8	2
60V-200	17.8	22.9	3.0	5.1	20 AWG/Φ0.8	2
60V-250	21.3	26.4	3.0	10.2	20 AWG/Φ0.8	2
60V-300	21.3	26.4	3.0	10.2	20 AWG/Φ0.8	2
60V-375	28.5	33.5	3.0	10.2	20 AWG/Φ0.8	2
60V-500	28.5	33.5	3.0	10.2	20 AWG/Φ0.8	2

Note: ① Dimensions A, B, C is the maximum size, D values are typical tolerance of ± 0.50mm

Thermal Derating Chart-IH (A)

Model	Maximum ambient operating temperatures (°C)									
	-40	-20	0	25	40	50	60	70	80	85
60V-005	0.08	0.07	0.06	0.05	0.04	0.04	0.03	0.03	0.02	0.02
60V-010	0.15	0.13	0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.04
60V-017	0.25	0.23	0.20	0.17	0.15	0.13	0.12	0.10	0.09	0.06
60V-020	0.30	0.27	0.24	0.20	0.18	0.16	0.14	0.12	0.10	0.08
60V-025	0.37	0.34	0.30	0.25	0.22	0.20	0.18	0.15	0.13	0.10
60V-030	0.45	0.40	0.35	0.30	0.27	0.24	0.21	0.19	0.16	0.12
60V-040	0.60	0.54	0.47	0.40	0.36	0.32	0.28	0.25	0.21	0.16
60V-050	0.75	0.68	0.59	0.50	0.45	0.40	0.36	0.31	0.27	0.20
60V-065	0.97	0.88	0.77	0.65	0.58	0.52	0.46	0.41	0.35	0.26
60V-075	1.12	1.02	0.89	0.75	0.67	0.60	0.54	0.47	0.40	0.30
60V-090	1.35	1.22	1.07	0.90	0.81	0.73	0.64	0.56	0.48	0.36
60V-110	1.65	1.49	1.31	1.10	0.99	0.89	0.79	0.69	0.59	0.44
60V-135	2.02	1.83	1.60	1.35	1.21	1.09	0.97	0.85	0.72	0.54
60V-160	2.40	2.17	1.90	1.60	1.44	1.29	1.15	1.00	0.86	0.64
60V-185	2.77	2.51	2.20	1.85	1.66	1.49	1.33	1.16	1.00	0.74
60V-200	3.00	2.72	2.38	2.00	1.80	1.62	1.44	1.26	1.08	0.80
60V-250	3.75	3.40	2.97	2.50	2.25	2.02	1.80	1.57	1.35	1.00
60V-300	4.50	4.08	3.57	3.00	2.70	2.43	2.16	1.89	1.62	1.20
60V-375	5.62	5.1	4.46	3.75	3.37	3.03	2.70	2.36	2.02	1.50
60V-500	7.50	6.80	5.95	5.00	4.50	4.05	3.60	3.15	2.70	2.00

Electrical Characteristic

Model	I_{Hold}	I_{Trip}	V_{max}	I_{max}	$P_d Max$	Maximum Time to Trip		Nominal resistance (mΩ)	
	(A)	(A)	V (DC)	A	W	Current (A)	Time (S)	R_{min}	R_{max}
60V-005	0.05	0.15	60	40	0.26	0.25	8.0	7.3	20
60V-010	0.10	0.3	60	40	0.38	0.5	5.0	2.5	7.5
60V-017	0.17	0.34	60	40	0.48	0.85	5.0	2	5.21
60V-020	0.2	0.4	60	40	0.41	1.0	5.0	1.5	2.84
60V-025	0.25	0.5	60	40	0.45	1.25	5.0	1.0	1.95
60V-030	0.30	0.6	60	40	0.49	1.5	5.0	0.76	1.38
60V-040	0.40	0.8	60	40	0.56	2.0	5.0	0.45	0.88
60V-050	0.50	1.0	60	40	0.77	2.5	5.0	0.40	0.79
60V-065	0.65	1.3	60	40	0.88	3.25	5.0	0.31	0.50
60V-075	0.75	1.5	60	40	0.92	3.75	5.0	0.25	0.42
60V-090	0.90	1.8	60	40	0.99	4.5	5.0	0.20	0.33
60V-110	1.10	2.2	60	40	1.5	5.5	8.0	0.15	0.27
60V-135	1.35	2.7	60	40	1.7	6.75	8.0	0.12	0.21

60V-160	1.60	3.2	60	40	1.9	8.0	8.0	0.09	0.16
60V-185	1.85	3.7	60	40	2.1	9.25	8.0	0.08	0.14
60V-200	2.00	4.0	60	40	2.3	10.0	8.0	0.07	0.14
60V-250	2.50	5.0	60	40	2.5	12.5	8.0	0.05	0.10
60V-300	3.00	6.0	60	40	2.8	15.0	8.0	0.04	0.08
60V-375	3.75	7.5	60	40	3.2	18.75	24.0	0.03	0.06
60V-500	5.00	10	60	40	3.5	25.0	24.0	0.02	0.06

Test Procedures And Requirements

Test	Test Conditions	Accept/Reject Criteria
Resistance	In still air @ 25°C	$R_{min} \leq R \leq R_{max}$
Time to T_{rip}	Specified current, V_{max} , 25°C	Tmaximum Time to Trip
Hold Current	60min, at I_H	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°C, 1000hrs	±8% typical
Humidity aging	+85°C, 85%R.H.1000hrs	±8% typical
Thermal shock	+125°C to -55°C, 10times	±12% typical
Resistance to solvent	MIL-STD-202, Method 215	No change
Vibration	MIL-STD-202, Method 201	No change

Operation Condition:

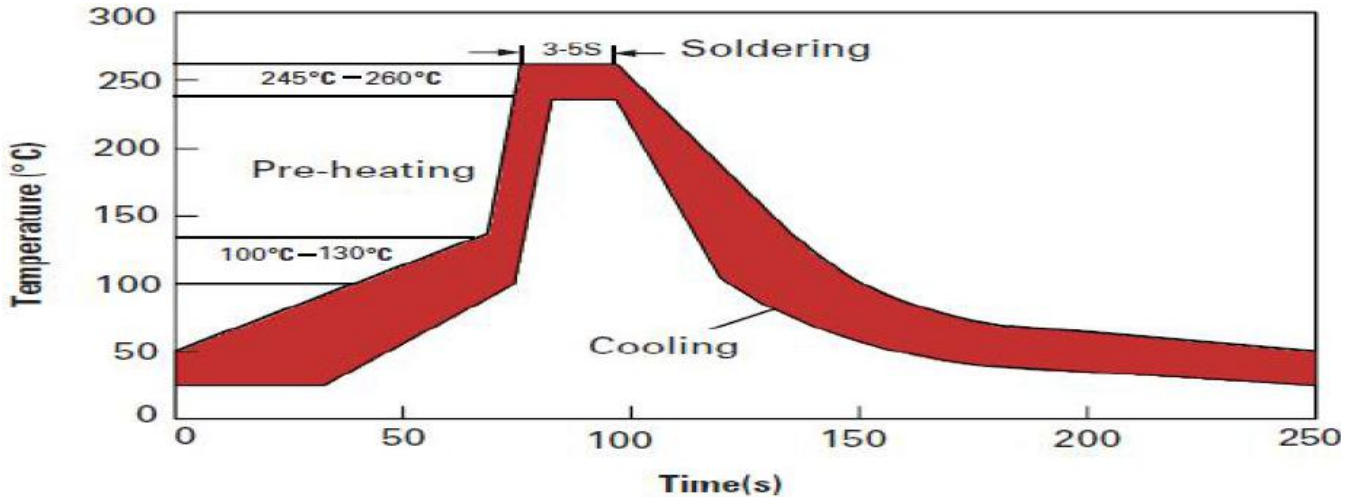
1. Ambient temperature: -40°C ~ 85°C
2. Humidity: ≤95%HR(40°C)
3. Atmospheric pressure: 86Kpa ~ 106Kpa.
4. Vibration frequency: 10Hz ~ 50Hz.
5. Acceleration: 98m/s².
6. Storage temperature: -40°C ~ 85°C.
7. Soldering

7.1 Wave Soldering:

Soldering Temperature: 240°C ~ 270°C

Soldering Time: ≤5sec.

Soldering Position: Resettable fuse wire and the bottom ≥ 6mm.



recommended curve

7.2 Manual soldering

Soldering Temperature: 280°C ~ 300°C

Soldering Time: ≤ 2sec.

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°C still air.

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

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

I_{max} = Maximum fault current device can withstand without 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 device when in state air environment.

R_{min} = Minimum device resistance at 25°C prior to tripping.

R_{max} = Maximum device resistance at 25°C 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 ratings 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 protection devices. However, users should independently evaluate and test the suitability of each product. YINT makes no warranties as to the accuracy or completeness of the information and disclaims any liability resulting from its use. YINT's only obligations are those in the YINT Standard Terms and Conditions of Sale and in no case will YINT be liable for any incidental, indirect, or consequential damages arising from the sale, resale, or misuse of its products. YINT reserves the right to change or update, without notice, any information contained in this specification.