

## Polymer PTC Resettable 16V Series

### Features:

- RoHS Compliant & Halogen Free
- Radial leaded Devices
- Cured, flame retardant epoxy polymer insulating material meets UL94V-0 requirements
- Operation Current: 0.1A~14A , Maximum Voltage: 16Vdc, Operating Temperature: -40°C TO 85°C

### Product Dimensions

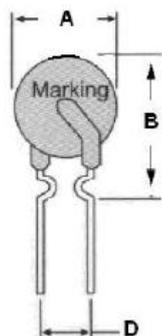


Fig1

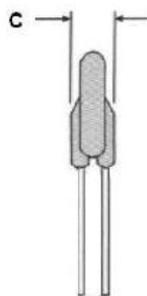


Fig2

Unit : mm

Model	Dimensions ( mm )				Lead material	Shape
	A(max)	B(max)	C(max)	D(typ)	Tinned matel(mm)	Fig
16V-010	5.5	12.0	3.0	5.1	24 AWG/Φ0.5	1
16V-025	5.5	12.0	3.0	5.1	24 AWG/Φ0.5	1
16V-030	5.5	12.0	3.0	5.1	24 AWG/Φ0.5	1
16V-050	5.5	12.0	3.0	5.1	24 AWG/Φ0.5	1
16V-075	7.4	13.5	3.0	5.1	24 AWG/Φ0.5	1
16V-090	7.4	13.5	3.0	5.1	24 AWG/Φ0.5	1
16V-110	7.4	13.5	3.0	5.1	24 AWG/Φ0.5	1
16V-135	7.4	13.5	3.0	5.1	24 AWG/Φ0.5	1
16V-160	7.4	14.0	3.0	5.1	24 AWG/Φ0.5	1
16V-200	9.0	12.0	3.0	5.1	24 AWG/Φ0.5	2
16V-300	9.0	12.0	3.0	5.1	20 AWG/Φ0.8	2
16V-400	10.0	13.0	3.0	5.1	20 AWG/Φ0.8	2
16V-500	10.0	17.5	3.0	5.1	20 AWG/Φ0.8	2
16V-600	13.5	17.5	3.0	5.1	20 AWG/Φ0.8	2
16V-700	13.5	23.0	3.0	5.1	20 AWG/Φ0.8	2
16V-800	13.5	23.0	3.0	5.1	20 AWG/Φ0.8	2
16V-900	15.0	24.0	3.0	5.1	20 AWG/Φ0.8	2
16V-1000	18.0	26.0	3.0	5.1	20 AWG/Φ0.8	2
16V-1100	18.0	26.0	3.0	5.1	20 AWG/Φ0.8	2
16V-1200	22.5	26.0	3.0	10.2	20 AWG/Φ0.8	2
16V-1300	24.0	30.0	3.0	10.2	20 AWG/Φ0.8	2



16V-1400	24.0	30.0	3.0	10.2	20 AWG/Φ0.8	2
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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
16V-010	0.14	0.13	0.12	0.1	0.09	0.08	0.08	0.07	0.06	0.04
16V-025	0.37	0.33	0.3	0.25	0.24	0.22	0.2	0.17	0.15	0.11
16V-030	0.44	0.39	0.36	0.3	0.28	0.26	0.24	0.21	0.18	0.14
16V-050	0.74	0.66	0.6	0.5	0.48	0.44	0.4	0.35	0.30	0.23
16V-075	1.11	0.99	0.9	0.75	0.72	0.66	0.6	0.53	0.45	0.35
16V-090	1.33	1.18	1.08	0.9	0.86	0.79	0.72	0.63	0.54	0.42
16V-110	1.62	1.45	1.32	1.1	1.05	0.96	0.88	0.78	0.67	0.51
16V-135	1.99	1.78	1.62	1.35	1.29	1.18	1.08	0.95	0.82	0.63
16V-160	2.36	2.11	1.92	1.6	1.53	1.40	1.28	1.13	0.97	0.75
16V-200	2.96	2.64	2.4	2	1.92	1.76	1.6	1.42	1.22	0.94
16V-300	4.44	3.96	3.6	3	2.88	2.64	2.4	2.13	1.83	1.41
16V-400	5.92	5.28	4.8	4	3.84	3.52	3.2	2.84	2.44	1.88
16V-500	7.4	6.6	6	5	4.8	4.4	4	3.55	3.05	2.35
16V-600	8.88	7.92	7.2	6	5.76	5.28	4.8	4.26	3.66	2.82
16V-700	10.36	9.24	8.4	7	6.72	6.16	5.6	4.97	4.27	3.29
16V-800	11.84	10.56	9.6	8	7.68	7.04	6.4	5.68	4.88	3.76
16V-900	13.32	11.88	10.8	9	8.64	7.92	7.2	6.39	5.49	4.23
16V-1000	14.8	13.2	12	10	9.6	8.8	8	7.1	6.1	4.7
16V-1100	16.28	14.52	13.2	11	10.56	9.68	8.8	7.81	6.71	5.17
16V-1200	17.76	15.84	14.4	12	11.52	10.56	9.6	8.52	7.32	5.64
16V-1300	19.24	17.16	15.6	13	12.48	11.44	10.4	9.23	7.93	6.11
16V-1400	20.72	18.48	16.8	14	13.44	12.32	11.2	9.94	8.54	6.58

### Electrical Characteristic

Model	I <sub>Hold</sub>	I <sub>Trip</sub>	V <sub>max</sub>	I <sub>max</sub>	P <sub>d Max</sub>	Maximum Time to Trip		Nominal resistance (mΩ)	
	(A)	(A)	V (DC)	A	W	Current (A)	Time (S)	R <sub>min</sub>	R <sub>max</sub>
16V-010	0.1	0.3	16	100	0.38	0.5	5	1500	7500
16V-025	0.25	0.5	16	100	0.45	1.25	5	500	1950
16V-030	0.3	0.6	16	100	0.49	1.5	5	300	700
16V-050	0.5	1.0	16	100	0.56	2.5	5	200	500
16V-075	0.75	1.5	16	100	0.72	3.75	5	100	260
16V-090	0.9	1.8	16	100	0.83	4.5	5	90	180
16V-110	1.1	2.2	16	100	0.94	5.5	5	60	150
16V-135	1.35	2.7	16	100	1.2	6.75	5	40	130
16V-160	1.6	3.2	16	100	1.4	8	5	40	110
16V-200	2	4	16	100	2.2	6	15	35	75

16V-300	3	6	16	100	2.3	9	15	20	60
16V-400	4	8	16	100	2.4	12	15	20	40
16V-500	5	10	16	100	2.6	15	15	14	25
16V-600	6	12	16	100	2.8	18	15	10	21
16V-700	7	14	16	100	3.0	21	15	8	15
16V-800	8	16	16	100	3.0	24	15	6	13
16V-900	9	18	16	100	3.3	27	25	4	12
16V-1000	10	20	16	100	3.7	30	30	4	11
16V-1100	11	22	16	100	3.7	33	30	3	9
16V-1200	12	24	16	100	4.2	36	30	3	8
16V-1300	13	26	16	100	4.2	39	50	3	8
16V-1400	14	28	16	100	4.2	40	50	3	7

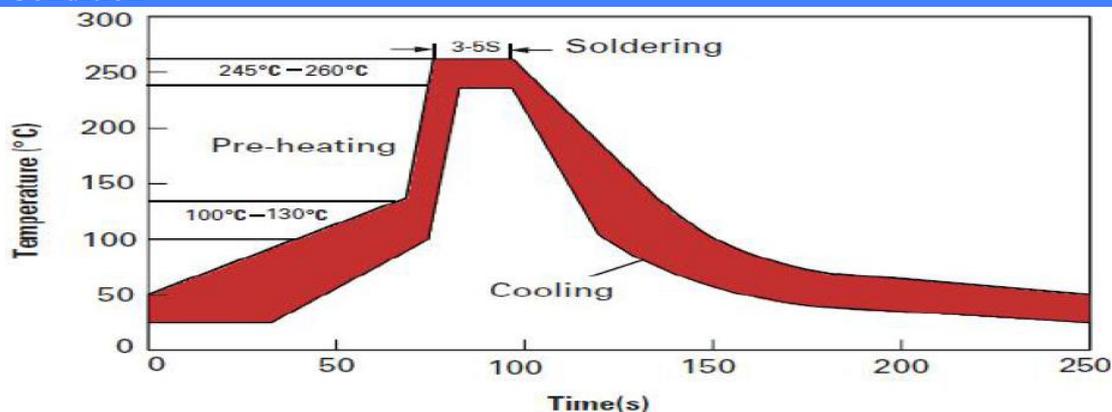
**Test Procedures And Requirements**

Test	Test Conditions	Accept/Reject Criteria
Resistance	In still air @ 25°C	$R_{min} \leq R \leq R_{max}$
Time to Trip	Specified current, $V_{max}$ , 25°C	Tmaximum 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°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**



recommended curve

1. Ambient temperature:  $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$
2. Humidity:  $\leq 95\% \text{HR}(40^{\circ}\text{C})$
3. Atmospheric pressure: 86Kpa  $\sim 106\text{Kpa}$ .
4. Vibration frequency: 10Hz  $\sim 50\text{Hz}$ .
5. Acceleration: 98m/s<sup>2</sup>.
6. Storage temperature:  $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$ .
7. Soldering
  - 7.1 Wave Soldering:  
Soldering Temperature:  $240^{\circ}\text{C} \sim 270^{\circ}\text{C}$   
Soldering Time:  $\leq 5\text{sec}$ .  
Soldering Position: Resettable fuse wire and the bottom  $\geq 6\text{mm}$ .
  - 7.2 Manual soldering  
Soldering Temperature:  $280^{\circ}\text{C} \sim 300^{\circ}\text{C}$   
Soldering Time:  $\leq 2\text{sec}$ .  
Soldering Position: Resettable fuse wire and the bottom  $\geq 6\text{mm}$ .

### Electrical Specifications:

$I_H$ =Hold current: maximum current at which the device will not trip at  $25^{\circ}\text{C}$  still air.

$I_T$ =Trip current: minimum current at which the device will always trip at  $25^{\circ}\text{C}$  still air.

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

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

$T_{\text{trip}}$ =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.

$R_{\text{min}}$ =Minimum device resistance at  $25^{\circ}\text{C}$  prior to tripping.

$R_{\text{max}}$ =Maximum device resistance at  $25^{\circ}\text{C}$  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.