



PTC Thermistors for Overcurrent Protection

SMDs, EIA Size 1210,
24 V, 63 V

Series/Type: B59606, B59607, B59707

Release:

Date:

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Overcurrent Protection
B59606, B59607, B59707
SMDs, EIA Size 1210, 24 V, 63 V
A606, A607, A707
SMD
Applications

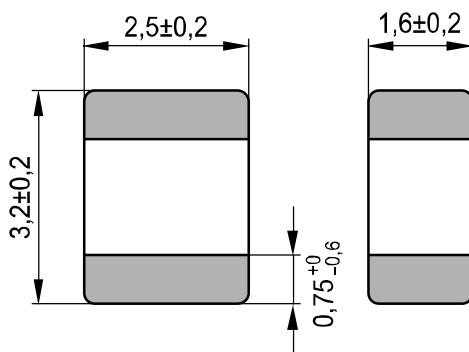
- Overcurrent protection
- Short-circuit protection

Features

- Thermistor chip with lead-free tinned terminations
- Small size
- Short response times
- Suitable for reflow soldering only
- Suitable for automatic placement

Delivery mode

- Blister tape, 180-mm reel

Dimensional drawing


TPT0790-F-E

 Termination

Dimensions in mm

General technical data

Switching cycles		N	100	
Tolerance of R_R		ΔR_R	± 25	%
Operating temperature range	($V = 0$)	T_{op}	-40/+125	°C
	($V = V_{max}$)	T_{op}	0/+60	°C

Electrical specifications and ordering codes

Type	I_R ¹⁾ mA	I_S ¹⁾ mA	I_{Smax} ($V = V_{max}$) A	T_{ref} °C	R_R Ω	R_{min} Ω	Ordering code
$V_{max} = 30$ VDC or VAC , $V_R = 24$ VDC or VAC							
A606	90	180	0.5	110	27	17	B59606A0110A062
A607	70	130	0.4	120	55	30	B59607A0120A062
$V_{max} = 80$ VDC or VAC , $V_R = 63$ VDC or VAC							
A707	50	90	0.3	120	125	75	B59707A0120A062

1) Measured on component soldered to standardized PCB

Reliability data

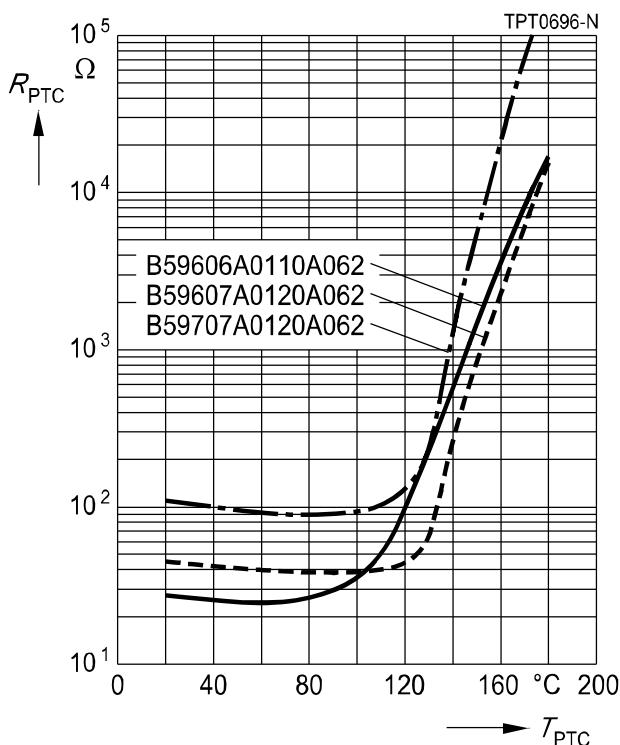
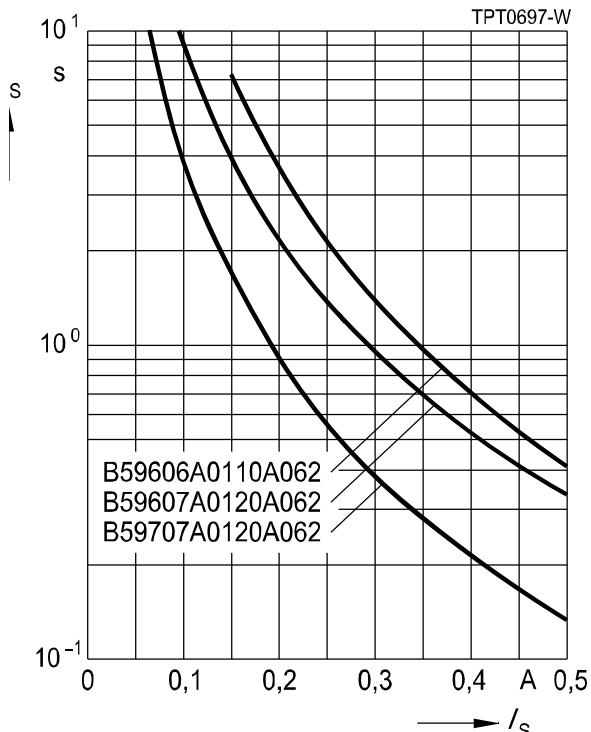
Test	Standard	Test conditions	$ \Delta R_{25}/R_{25} $
Switching test at room temperature	IEC 60738-1	I_{Smax}, V_{max} Number of cycles: 100	< 25%
Dry heat at upper category temperature	IEC 60738-1	Storage at upper category temperature for $t : 1000 \text{ h}$	< 25%
Life test at V_{max} / T_{op}	IEC 60738-1	Storage at V_{max} / T_{op} for $t : 1000 \text{ h}$	< 25%
Storage in damp heat	IEC 60068-2-3	Temperature of air: 40 °C Relative humidity of air: 93% Duration: 56 days	< 10%
Rapid change of temperature in air	IEC 60068-2-14, Test Na	$T = T_{LCT}, T = T_{UCT}$ Number of cycles: 5 $t = 30 \text{ min}$	< 10%
Vibration	IEC 60068-2-6, Test Fc	$f = 10 - 55 \text{ Hz}$ $h = 0.75 \text{ mm}$ (respectively 10 g) $t = 3 \cdot 2 \text{ h}$	< 5%
Bump	IEC 60068-2-27	Pulse shape: half-sine $a = 50 \text{ g}$ Pulse duration: 1 ms; 6 · 3 pulses	< 5%
Climatic sequence	IEC 60068-2-30	Dry heat: $T = T_{UCT}$ $t : 16 \text{ h}$ Damp heat first cycle Cold: $T = T_{LCT}$ $t : 2 \text{ h}$ Damp heat 5 cycles	< 10%
Bending test	EN 130000/4.35	Components reflow-soldered to test board Maximum bending: 2 mm	< 10%

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Characteristics (typical)

 PTC resistance R_{PTC} versus

 PTC temperature T_{PTC}

(measured at low signal voltage)


 Switching time t_s versus switching current I_s
 (measured at 25 °C in still air)

 Rated current I_R versus ambient temperature T_A
 (measured in still air)
