



PTC Thermistors for Overcurrent Protection

SMDs, EIA Size 1210,
24 V, 63 V

Series/Type: B59606, B59607, B59707

Release:

Date:

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SMD
Applications

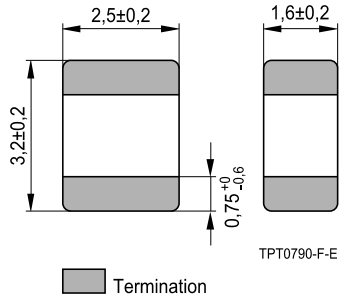
- Overcurrent protection
- Short-circuit protection

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


Dimensions in mm

General technical data

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

Electrical specifications and ordering codes

Type	I_R ¹⁾	I_S ¹⁾	I_{Smax} ($V = V_{max}$)	T_{ref}	R_R	R_{min}	Ordering code
	mA	mA	A	$^{\circ}\text{C}$	Ω	Ω	
$V_{max} = 30$ 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

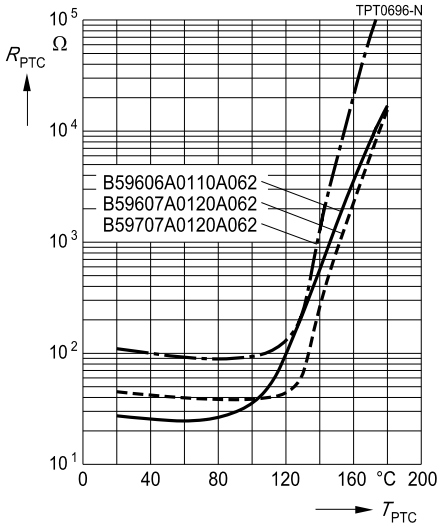
1) Measured on component soldered to standardized PCB

Reliability data

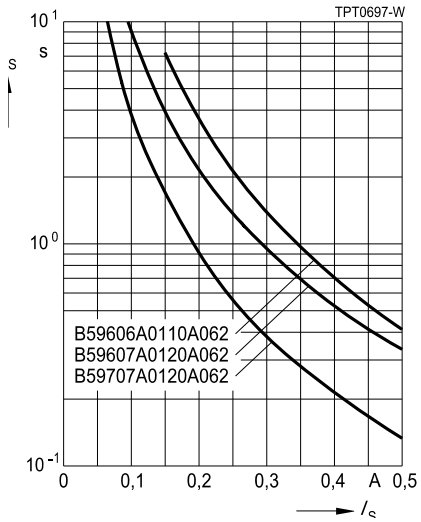
Test	Standard	Test conditions	$ \Delta R_{25}/R_{25} $
Switching test at room temperature	IEC 60738-1	I_{Smax}, V_{max} Number of cycles: 100	< 25%
Dry heat at upper category temperature	IEC 60738-1	Storage at upper category temperature for $t : 1000$ h	< 25%
Life test at V_{max}/T_{op}	IEC 60738-1	Storage at V_{max}/T_{op} for $t : 1000$ 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 $t = 30$ min	< 10%
Vibration	IEC 60068-2-6, Test Fc	$f = 10 - 55$ Hz $h = 0.75$ mm (respectively 10 g) $t = 3 \cdot 2$ h	< 5%
Bump	IEC 60068-2-27	Pulse shape: half-sine $a = 50$ g Pulse duration: 1 ms; 6 · 3 pulses	< 5%
Climatic sequence	IEC 60068-2-30	Dry heat: $T = T_{UCT}$ $t : 16$ h Damp heat first cycle Cold: $T = T_{LCT}$ $t : 2$ h Damp heat 5 cycles	< 10%
Bending test	EN 13000/4.35	Components reflow-soldered to test board Maximum bending: 2 mm	< 10%

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)

