

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

Overcurrent Protection

B59606, B59607, B59707

SMDs, EIA Size 1210, 24 V, 63 V

A606, A607, A707

Applications

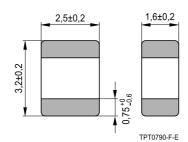
- Overcurrent protection
- Short-circuit protection

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



Termination

Dimensions in mm

Dimensional drawing

General technical data

Switching cycles		Ν	100	
Tolerance of R _R		ΔR_R	±25	%
Operating temperature range	(V = 0)	T _{op}	-40/+125	°C
	$(V = V_{max})$	Ton	0/+60	°C

Electrical specifications and ordering codes

Туре	I _R 1)	I _S 1)	I _{Smax}	T _{ref}	R _R	R_{min}	Ordering code	
			$(V = V_{max})$					
	mA	mA	Α	°C	Ω	Ω		
$V_{max} = 30 \text{ VDC or VAC}$, $V_{R} = 24 \text{ VDC or VAC}$								
A606	90	180	0.5	110	27	17	B59606A0110A062	
A607	70	130	0.4	120	55	30	B59607A0120A062	
$V_{\text{max}} = 80 \text{ VDC or VAC}$, $V_{\text{R}} = 63 \text{ VDC or VAC}$								
A707	50	90	0.3	120	125	75	B59707A0120A062	



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

Reliability data

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



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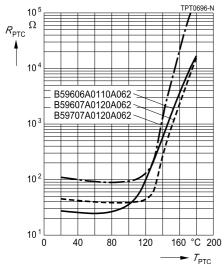
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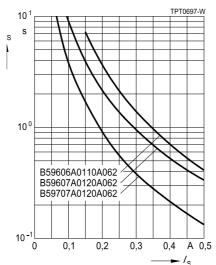
Characteristics (typical)

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)

