



PTC thermistors for overcurrent protection

SMDs, EIA sizes 0603 and 1210, 24 V, 42 V, 63 V
and 230 V

Series/Type:

Overcurrent protection

SMDs, EIA sizes 0603 and 1210, 24 V, 42 V, 63 V and 230 V

SMD

Applications

- Overcurrent protection
- Short circuit protection

Features

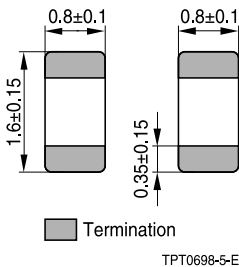
- Thermistor chip with lead-free tinned terminations
- Small size
- Short response times
- Suitable for reflow soldering only
- Suitable for automatic placement
- RoHS-compatible

Delivery mode

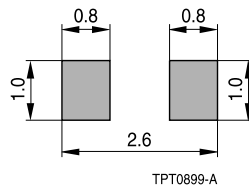
- Blister tape (case size 1210) or cardboard tape (case size 0603), 180-mm reel with 8-mm tape, taping to IEC 60286-3

Dimensional drawings in mm

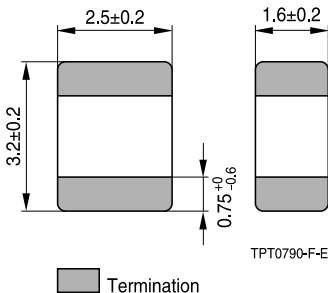
EIA case size 0603



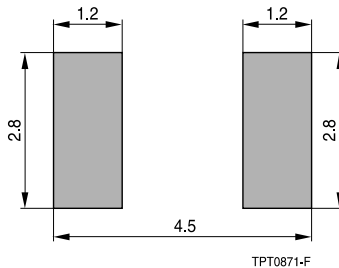
Solder pad



EIA case size 1210



Solder pad



Recommended maximum dimensions (mm)

Overcurrent protection

SMDs, EIA sizes 0603 and 1210, 24 V, 42 V, 63 V and 230 V

SMD

General technical data

Switching cycles		N	100	
Tolerance of R_R	(except A907)	ΔR_R	± 25	%
Tolerance of R_R	(for A907)	ΔR_R	± 35	%
Operating temperature range	(V = 0)	T_{op}	$-40/+125$	°C
Operating temperature range	(V = V_{max} , except A907)	T_{op}	$-20/+85$	°C
Operating temperature range	(V = V_{max} , for A907)	T_{op}	$-40/+85$	°C

Electrical specifications and ordering codes

Type	$I_R^{1)}$ mA	$I_S^{1)}$ mA	I_{Smax} (V = V_{max}) A	R_R Ω	R_{min} Ω	EIA case size	Ordering code
$V_{max} = 30$ V DC or V AC, $V_R = 24$ V DC or V AC							
A606	90	180	0.5	27	17	1210	B59606A0110A062
A607	70	130	0.4	55	30	1210	B59607A0120A062
$V_{max} = 60$ V DC or V AC, $V_R = 42$ V DC or V AC							
A622	22	47	0.22	220	150	0603	B59622A0090A062
$V_{max} = 80$ V DC or V AC, $V_R = 63$ V DC or V AC							
A623	15	33	0.15	470	300	0603	B59623A0090A062
A707	50	90	0.3	125	75	1210	B59707A0120A062
$V_{max} = 265$ V DC or V AC, $V_R = 230$ V DC or V AC							
A807	15	40	0.2	400	200	1210	B59807A0090A062
$V_{max} = 400$ V DC or V AC, $V_R = 230$ V DC or V AC							
A907	12	22	0.15	1500	640	1210	B59907A0120A062

1) Measured on component soldered to standardized PCB

Overcurrent protection
SMDs, EIA sizes 0603 and 1210, 24 V, 42 V, 63 V and 230 V
SMD
Reliability data

Test	Standard	Test conditions	$ \Delta R_{25}/R_{25} $
Electrical endurance, cycling	IEC 60738-1	Room temperature, $I_{Smax}; V_{max}$ Number of cycles: 100	< 25%
Electrical endurance, constant	IEC 60738-1	Storage at $V_{max}/T_{op,max}$ (V_{max}) Test duration: 1000 h	< 25%
Damp heat	IEC 60738-1	Temperature of air: 40 °C Relative humidity of air: 93% Duration: 56 days Test according to IEC 60068-2-78	< 10%
Rapid change of temperature	IEC 60738-1	$T_1 = T_{op,min}$ (0 V), $T_2 = T_{op,max}$ (0 V) Number of cycles: 5 Test duration: 30 min Test according to IEC 60068-2-14, Test Na	< 10%
Vibration	IEC 60738-1	Frequency range: 10 to 55 Hz Displacement amplitude: 0.75 mm Test duration: 3×2 h Test according to IEC 60068-2-6, Test Fc	< 5%
Shock	IEC 60738-1	Acceleration: 390 m/s ² Pulse duration: 6 ms; 6×4000 pulses	< 5%
Climatic sequence	IEC 60738-1	Dry heat: $T = T_{op,max}$ (0 V) Test duration: 16 h Damp heat first cycle Cold: $T = T_{op,min}$ (0 V) Test duration: 2 h Damp heat 5 cycles Tests performed according to IEC 60068-2-30	< 10%
Bending test	EN 130000/4.35	Components reflow-soldered to test board Maximum bending: 2 mm	< 10%
Adhesive strength on PCB		A shear force of 5 N is applied perpendicular to the longitudinal axis of the component which is soldered on PCB.	No visible damage