

Features and applications for SMD PTC thermistors

Features

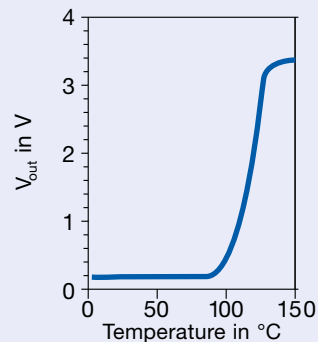
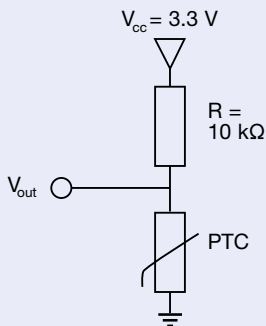
- Qualification based on AEC-Q200, Rev. D
- Reflow soldering only
- Certified to IEC 60738-1 and IEC 60730-1, annex J15 and J17
- Fast and reliable response
- RoHS-compatible
- UL approval to UL1434
- Lead-free tinned terminations for case sizes 0603 and 0805
- Lead-free ceramics for case sizes 0402 and 0805

Applications

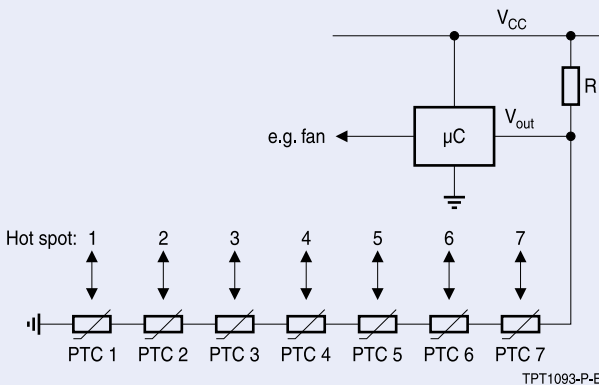
- Over-temperature protection of power components
- DC/DC converters
- SMPS, adapters
- Notebooks, game consoles
- Lighting: LED lights, dimmers, ballasts
- Automotive LED lighting
- Li-Ion battery pack protection
- Hifi amplifiers

Application circuit examples

Over-temperature detection circuit and its output voltage



Example of over-temperature detection for multiple hot spots



Product range



Electrical specifications and ordering codes

EIA case size	$T_{\text{sense},1}$ (@ 4.7 k Ω) [°C]	$T_{\text{sense},2}$ (@ 47 k Ω) [°C]	R_R ($V \leq V_{\text{max}}$) [Ω]	ΔR_R [%]	Ordering code		
Superior series, case size 0402							
0402	75 \pm 5	–	470	\pm 50	B59421A0075A062		
0402	85 \pm 5	–	470	\pm 50	B59421A0085A062		
0402	95 \pm 5	–	470	\pm 50	B59421A0095A062		
0402	105 \pm 5	–	470	\pm 50	B59421A0105A062		
0402	115 \pm 5	–	470	\pm 50	B59421A0115A062		
0402	125 \pm 5	–	470	\pm 50	B59421A0125A062		
0402	135 \pm 5	–	470	\pm 50	B59421A0135A062		
Superior series, case size 0603							
0603	75 \pm 5	–	470	\pm 50	B59641A0075A062		
0603	85 \pm 5	100 \pm 7	470	\pm 50	B59641A0085A062		
0603	95 \pm 5	110 \pm 7	470	\pm 50	B59641A0095A062		
0603	105 \pm 5	120 \pm 7	470	\pm 50	B59641A0105A062		
0603	115 \pm 5	130 \pm 7	470	\pm 50	B59641A0115A062		
0603	125 \pm 5	140 \pm 7	470	\pm 50	B59641A0125A062		
0603	135 \pm 5	150 \pm 7	470	\pm 50	B59641A0135A062		
0603	145 \pm 5	–	470	\pm 50	B59641A0145A062		
Superior series, case size 0805							
EIA case size	$T_{\text{sense},1}$ [°C]	R_R ($V \leq V_{\text{max}}$) [Ω]	ΔR_R [%]	R ($T_{\text{sense},1} - 5^\circ\text{C}$) [k Ω]	R ($T_{\text{sense},1} + 5^\circ\text{C}$) [k Ω]	R ($T_{\text{sense},1} + 15^\circ\text{C}$) [k Ω]	Ordering code
0805	70	680	\pm 50	≤ 5.7	≤ 5.7	–	B59721A0070A062
0805	80	680	\pm 50	≤ 5.7	≤ 5.7	–	B59721A0080A062
0805	90	680	\pm 50	≤ 5.5	≤ 13.3	≥ 40	B59721A0090A062
0805	100	680	\pm 50	≤ 5.5	≤ 13.3	≥ 40	B59721A0100A062
0805	110	680	\pm 50	≤ 5.5	≤ 13.3	≥ 40	B59721A0110A062
0805	120	680	\pm 50	≤ 5.5	≤ 13.3	≥ 40	B59721A0120A062
0805	130	680	\pm 50	≤ 5.5	≤ 13.3	≥ 40	B59721A0130A062

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