

Vishay BCcomponents

SMD NTC Thermistors with Enhanced Stability

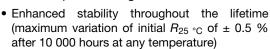


QUICK REFERENCE DATA						
PARAMETER	VALUE	UNIT				
Resistance value at 25 °C	100K to 210K	Ω				
Tolerance on R_{25} -value	1	%				
B _{25/85} -value	3590	K				
Tolerance on B _{25/85} -value	± 1	%				
Maximum power dissipation (by case)	70 (0402), 120 (0603), 210 (0805)	mW				
Response time (63.2 %) 25 °C to 85 °C still air (for info by case)	4 (0402), 6 (0603), 10 (0805)	S				
Dissipation factor δ in still air (for each case)	2 (0402), 3 (0603), 3.5 (0805)	mW/K				
Operating temperature range	-40 to +125	°C				
Weight	1.2 (0402), 6 (0603), 8 (0805)	mg				

FEATURES









- · Ideal for wave and reflow soldering
- Delivered on punched paper tape on reel
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

APPLICATIONS

 All applications that require the utmost stability in time (medical application, heat counting, billing meters)

MOUNTING

Please refer to information provided for generic NTCS serie.

PACKAGING

Available in 8 mm punched paper tape on reel package of 4000 units (case 0603 and case 0805) and 10 000 (case 0402).

DESIGN-IN SUPPORT

For complete curve computation, please visit: www.vishay.com/thermistors/curve-computation-list/

ELECTRICAL DATA AND ORDERING INFORMATION							
R ₂₅ (Ω)	R ₂₅ -TOL. (± %)	B _{25/85} (K)	B _{25/85} -TOL. (± %)	SAP MATERIAL AND ORDERING NUMBER	DESCRIPTION		
100 000	1	3590	1	NTCS0805E3104SMT	SMD NTC thermistor 0805 Ni barrier		
122 000	1	3590	1	NTCS0603E3124SMT	SMD NTC thermistor 0603 Ni barrier		
210 000	1	3590	1	NTCS0402E3214SMT	SMD NTC thermistor 0402 Ni barrier		

DIMENSIONS in millimeters								
	▼ 	 	PARAMETER		VALUE			
	<u> </u>		Case	0402	0603	0805		
	L ₁	L ₂	L	1 ± 0.15	1.6 ± 0.15	2 ± 0.2		
			W	0.5 ± 0.15	0.8 ± 0.15	1.25 ± 0.15		
	L ₂		Т	0.5 ± 0.15	0.8 ± 0.15	0.8 ± 0.15		
	+ .		L1, L3 min.	0.1	0.2	0.2		
			L2 min.	0.3	0.4	0.55		

Note

• Non-dimensioned details do not affect the performance of the thermistors



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RELIABILITY INFORMATION

After a test of storage at any temperature within the temperature range, the drift of electrical resistance at 25 °C is always lower than \pm 0.5 %, which represents a temperature drift less than \pm 0.1 °C (see here under typical figures for drift after storage during 10 000 h at maximal temperature 125 °C). The same type of stability is also observed in thermal shocks between the two extreme values of the temperature range. The tests are performed according to IEC 60068-2-2 and 2-14.

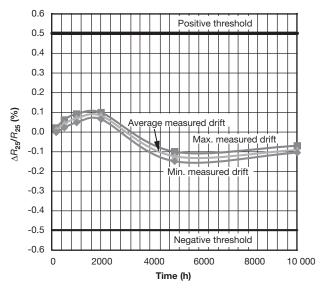


Fig. 1 - $R_{25~^{\circ}\text{C}}$ Drift after Storage at 125 $^{\circ}\text{C}$ for 0603 Case

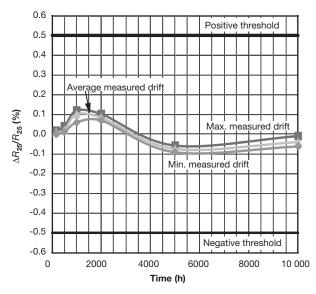


Fig. 2 - Drift in Storage at 125 °C for 0402 Case

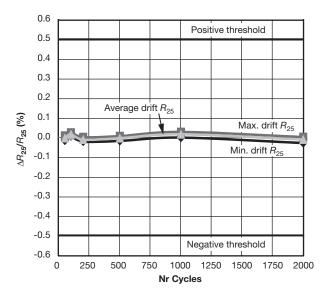


Fig. 3 - R_{25 °C} Drift in Thermal Shocks -40 °C, 15 min/125 °C, 15 min



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