



Applications

- Temperature measurement and compensation in
 - hybrid circuits
 - data systems
 - telecom systems
 - automotive electronics

Features

- Silver palladium termination (AgPd)
- Cost-effective
- Suitable for wave and reflow soldering

Options

Alternative resistance ratings and resistance tolerance
< 5% available on request

Delivery mode

Cardboard tape, 180-mm reel, PU: 4000 pcs

Climatic category (IEC 60068-1)

Max. power at 25 °C (on PCB)

Resistance tolerance

Rated temperature

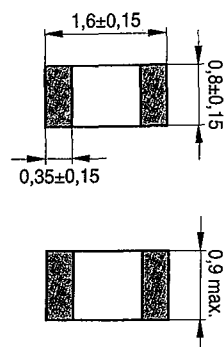
B value tolerance

Dissipation factor (on PCB)

Thermal cooling time constant (on PCB)

Heat capacity

P_{25}	180	55/125/21	mW
$\Delta R_N/R_N$	$\pm 5\%, \pm 10\%, \pm 20\%$		
T_N	25		°C
$\Delta B/B$	$\pm 3\%$		
$\delta p^{(1)}$	approx. 3		mW/K
$\tau_c^{(1)}$	approx. 4		s
$C_{th}^{(1)}$	approx. 12		mJ/K



Termination

TN70396-Y

Dimensions in mm
Approx. weight 6 mg

R_{25}	No. of R/T characteristic	$B_{25/50}$	$B_{25/65}$	$B_{25/100}$	Ordering code
Ω	K	K	K	K	
10 K	1010	3470	3510	3530	B57619C0103+060
22 K	1008	3480	3550	3560	B57619C0223+060
47 K	2001	3860	3890	3920	B57619C0473+060

$\pm$: J for $\Delta R_N/R_N = \pm 5\%$

K for $\Delta R_N/R_N = \pm 10\%$

M for $\Delta R_N/R_N = \pm 20\%$

1) Depends on mounting situation



Reliability data

SMD NTC thermistors are tested in accordance with IEC 60068. The parts are mounted on a standardized PCB in accordance with IEC 60539-1.

Test	Standard	Test conditions	$\Delta R_{25}/R_{25}$ (typical)	Remarks
Storage in dry heat	IEC 60068-2-2 JIS C 0021	Storage at upper category temperature T: (125 $\pm$ 2) °C t: 1000 h	< 3 %	
Storage in damp heat, steady state	IEC 60068-2-3 JIS C 0022	Temperature of air: (40 $\pm$ 2) °C Relative humidity of air: (93 $\pm$ 2)–(3) % Duration: 21 days	< 3 %	No visible damage
Rapid temperature cycling	IEC 60068-2-14 JIS C 0025	Lower test temperature: – 55 °C Upper test temperature: 125 °C Number of cycles: 10	< 3 %	
Endurance		P_{max} : 180 mW T: (65 $\pm$ 2) °C t: 1000 h	< 5 %	
Solderability	IEC 60068-2-58 JIS C 0054	Solderability: (215 $\pm$ 3) °C / (3 $\pm$ 0,3) s (235 $\pm$ 5) °C / (2 $\pm$ 0,2) s		95 % of terminations wetted
Resistance drift after soldering		Resistance to soldering heat: (260 $\pm$ 5) °C / (10 $\pm$ 1) s Reflow soldering profile Wave soldering profile	< 5 %	

Temperature Measurement
SMD NTC Thermistors with Silver Palladium Termination, Size 0805 B57620 C 620



Applications

- Temperature measurement and compensation in
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Features

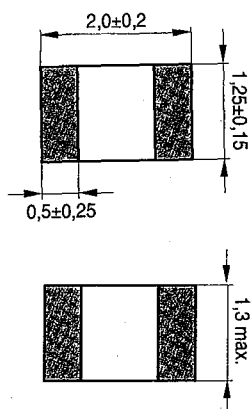
- Silver palladium termination (AgPd)
- Cost-effective
- Suitable for wave and reflow soldering

Options

Alternative resistance ratings and resistance tolerance
< 5 % available on request

Delivery mode

Blister tape, 180-mm reel, PU; 4000 pcs



Termination

Dimensions in mm
Approx. weight 13 mg

TNT0397-7-E

Climatic category (IEC 60068-1)		P_{25} $\Delta R_N/R_N$		T_N $\Delta B/B$		$\delta_{th}^{(1)}$ $\tau_c^{(1)}$		$C_{th}^{(1)}$	
Max. power at 25 °C (on PCB)		210		± 5 %, ± 10 %, ± 20 %		± 3 %		approx. 3,5	
Resistance tolerance		25		± 3 %		approx. 10		approx. 35	
Rated temperature		25		± 3 %		approx. 10		approx. 35	
B value tolerance		25		± 3 %		approx. 10		approx. 35	
Dissipation factor (on PCB)		25		± 3 %		approx. 10		approx. 35	
Thermal cooling time constant (on PCB)		25		± 3 %		approx. 10		approx. 35	
Heat capacity		25		± 3 %		approx. 10		approx. 35	

R_{25}	No. of R/T characteristic	$B_{25/50}$	$B_{25/85}$	$B_{25/100}$	Ordering code
220	3207	3060	3090	3100	B57620C0221+062
330	3204	3190	3250	3250	B57620C0331+062
470	3205	3270	3290	3300	B57620C0471+062
680	3206	3420	3440	3450	B57620C0681+062
1 k	3206	3420	3440	3450	B57620C0102+062
2.2 k	1304	3250	3280	3300	B57620C0222+062
4.7 k	1010	3470	3510	3530	B57620C0472+962

±: J for $\Delta R_N/R_N = \pm 5 \%$
K for $\Delta R_N/R_N = \pm 10 \%$
M for $\Delta R_N/R_N = \pm 20 \%$

¹⁾ Depends on mounting situation

Temperature Measurement
SMD NTC Thermistors with Silver Palladium Termination, Size 0805 B57620 C 620



R_{25}	No. of R/T characteristic	$B_{25/50}$	$B_{25/85}$	$B_{25/100}$	Ordering code
10 k	1011	3660	3730	3730	B57620C0103+062
22 k	2003	3930	3960	3980	B57620C0223+062
47 k	2101	4030	4080	4100	B57620C0473+062
100 k	2903	4120	4190	4200	B57620C0104+162
220 k	2904	4230	4280	4300	B57620C0224+062

±: J for $\Delta R_N/R_N = \pm 5 \%$
K for $\Delta R_N/R_N = \pm 10 \%$
M for $\Delta R_N/R_N = \pm 20 \%$

Reliability data

SMD NTC thermistors are tested in accordance with IEC 60068. The parts are mounted on a standardized PCB in accordance with IEC 60539-1.

Test	Standard	Test conditions	$\Delta R_{25}/R_{25}$ (typical)	Remarks
Storage in dry heat	IEC 60068-2-2 JIS C 0021	Storage at upper category temperature T: (125 ± 2) °C t: 1000 h	< 3 %/ < 6 % ¹⁾	
Storage in damp heat, steady state	IEC 60068-2-3 JIS C 0022	Temperature of air: (40 ± 2) °C Relative humidity of air: (93 ± 2) % Duration: 21 days	< 3 %	No visible damage
Rapid temperature cycling	IEC 60068-2-14 JIS C 0025	Lower test temperature: – 55 °C Upper test temperature: 125 °C Number of cycles: 10	< 3 %	
Endurance		P_{max} : 210 mW T: (65 ± 2) °C t: 1000 h	< 5 %	
Solderability	IEC 60068-2-58 JIS C 0054	Solderability: (215 ± 3) °C / (3 ± 0,3) s (235 ± 5) °C / (2 ± 0,2) s		95 % of terminations wetted
Resistance drift after soldering		Resistance to soldering heat: (260 ± 5) °C / (10 ± 1) s Reflow soldering profile Wave soldering profile	< 5 %	

¹⁾ The higher value applies to 220 Ω – 1 kΩ types.



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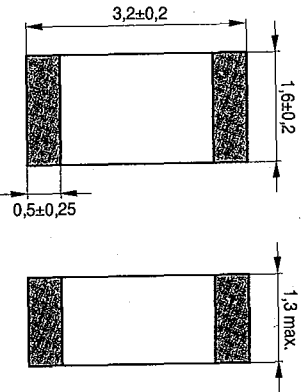
- Silver palladium termination (AgPd)
- Cost-effective
- Suitable for wave and reflow soldering

Options

Alternative resistance ratings and resistance tolerance
< 5% available on request

Delivery mode

Blister tape, 180-mm reel, P.U. 4000 or 2000 pcs, depending on chip thickness



Termination

TNT0398-F

Dimensions in mm/Approx. weight 18 mg

Climatic category (IEC 60068-1)	P_{25} $\Delta R_N/R_N$	55/125/21	mW
Max. power at 25 °C (on PCB)	$\pm 5\%, \pm 10\%, \pm 20\%$	300	
Resistance tolerance	T_N	25	°C
Rated temperature	$\Delta B/B$	$\pm 3\%$	
B value tolerance	$\delta_{th}^{(1)}$	approx. 5	mW/K
Dissipation factor (on PCB)	$t_c^{(1)}$	approx. 10	s
Thermal cooling time constant (on PCB)	$C_{th}^{(1)}$	approx. 50	mJ/K
Heat capacity			

R_{25}	No. of R/T characteristic	$B_{25/50}$ K	$B_{25/85}$ K	$B_{25/100}$ K	Ordering code
2.2 k	1308	3010	3040	3060	B57621C0222+062
3.3 k	1309	3430	3500	3520	B57621C0332+062
4.7 k	1309	3430	3500	3520	B57621C0472+062
10 k	1010	3470	3510	3530	B57621C0103+062
15 k	1008	3480	3550	3560	B57621C0153+062
22 k	1008	3480	3550	3560	B57621C0223+062
33 k	2003	3930	3960	3980	B57621C0333+062
47 k	2001	3860	3890	3920	B57621C0473+062
68 k	2001	3860	3890	3920	B57621C0683+062

±: J for $\Delta R_N/R_N = \pm 5\%$

K for $\Delta R_N/R_N = \pm 10\%$

M for $\Delta R_N/R_N = \pm 20\%$

¹⁾ Depends on mounting situation



R_{25}	No. of R/T characteristic	$B_{25/50}$ K	$B_{25/85}$ K	$B_{25/100}$ K	Ordering code
100 k	4901	3870	3930	3950	B57621C0104+062
150 k	2903	4120	4190	4200	B57621C0154+162
220 k	2903	4120	4190	4200	B57621C0224+062
330 k	1014	4090	4210	4250	B57621C0334+062
470 k	1014	4090	4210	4250	B57621C0474+062

±: J for $\Delta R_N/R_N = \pm 5\%$

K for $\Delta R_N/R_N = \pm 10\%$

M for $\Delta R_N/R_N = \pm 20\%$

Reliability data

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Test	Standard	Test conditions	$\Delta R_{25}/R_{25}$ (typical)	Remarks
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Storage in damp heat, steady state	IEC 60068-2-3 JIS C 0022	Temperature of air: (40 ± 2) °C Relative humidity of air: (93 ± 2) % Duration: 21 days	< 3 %	No visible damage
Rapid temperature cycling	IEC 60068-2-14 JIS C 0025	Lower test temperature: - 55 °C Upper test temperature: 125 °C Number of cycles: 10	< 3 %	
Endurance		P_{max} : 300 mW T: (65 ± 2) °C t: 1000 h	< 5 %	
Solderability	IEC 60068-2-58 JIS C 0054	Solderability: (215 ± 3) °C / (3 ± 0,3) s (235 ± 5) °C / (2 ± 0,2) s		95 % of terminations wetted
Resistance drift after soldering		Resistance to soldering heat: (260 ± 5) °C / (10 ± 1) s Reflow soldering profile Wave soldering profile	< 5 %	