SMD

Applications

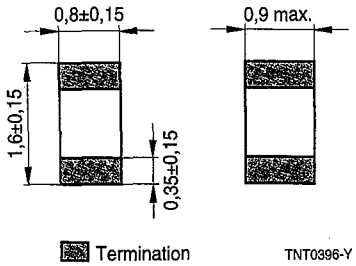
- Temperature measurement and compensation in
  - hybrid circuits
  - data systems
  - telecom systems
  - automotive electronics

Features

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

Options

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



Dimensions in mm
Approx. weight 6 mg

Delivery mode

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

Climatic category (IEC 60068-1)		55/125/21	
Max. power at 25 °C (on PCB)	P_{25}	180	mW
Resistance tolerance	$\Delta R_N/R_N$	± 5 %, ± 10 %, ± 20 %	
Rated temperature	T_N	25	°C
B value tolerance	$\Delta B/B$	± 3 %	
Dissipation factor (on PCB)	δ_{th} [1)]	approx. 3	mW/K
Thermal cooling time constant (on PCB)	τ_c [1)]	approx. 4	s
Heat capacity	C_{th} [1)]	approx. 12	mJ/K

R_{25} Ω	No. of *R/T* characteristic	$B_{25/50}$ K	$B_{25/85}$ K	$B_{25/100}$ K	Ordering code
10 k	1010	3470	3510	3530	B57619C0103+060
22 k	1008	3480	3550	3560	B57619C0223+060
47 k	2001	3860	3890	3920	B57619C0473+060

+: 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

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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 %	
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/–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 ± 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 Resistance to soldering heat: (260 ± 5) °C / (10 ± 1) s		95 % of terminations wetted
Resistance drift after soldering		Reflow soldering profile Wave soldering profile	< 5 %	

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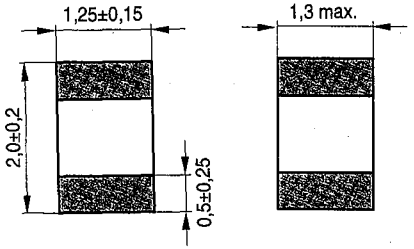

Dimensions in mm
Approx. weight 13 mg

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

Climatic category (IEC 60068-1)		55/125/21	
Max. power at 25 °C (on PCB)	P_{25}	210	mW
Resistance tolerance	$\Delta R_N/R_N$	± 5 %, ± 10 %, ± 20 %	
Rated temperature	T_N	25	°C
B value tolerance	$\Delta B/B$	± 3 %	
Dissipation factor (on PCB)	δ_{th} 1)	approx. 3,5	mW/K
Thermal cooling time constant (on PCB)	τ_c 1)	approx. 10	s
Heat capacity	C_{th} 1)	approx. 35	mJ/K

R_{25} Ω	No. of *R/T* characteristic	$B_{25/50}$ K	$B_{25/85}$ K	$B_{25/100}$ K	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

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R_{25} Ω	No. of *R/T* characteristic	$B_{25/50}$ K	$B_{25/85}$ K	$B_{25/100}$ K	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

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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/−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}: 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 Resistance to soldering heat: (260 ± 5) °C / (10 ± 1) s		95 % of terminations wetted
Resistance drift after soldering		Reflow soldering profile Wave soldering profile	< 5 %	

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

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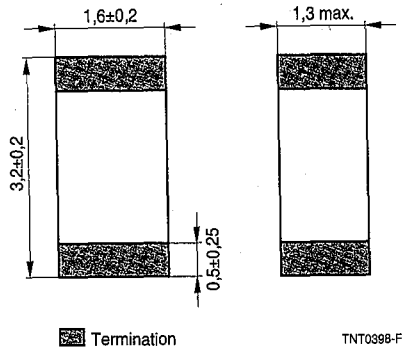

Dimensions in mm/Approx. weight 18 mg

Options

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

Delivery mode

Blister tape, 180-mm reel, PU: 4000 or 2000 pcs, depending on chip thickness

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

R_{25} Ω	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

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R_{25} Ω	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
Storage in dry heat	IEC 60068-2-2 JIS C 0021	Storage at upper category temperature T: (125 ± 2) °C t: 1000 h	< 3 %	
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/−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}: 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 Resistance to soldering heat: (260 ± 5) °C / (10 ± 1) s		95 % of terminations wetted
Resistance drift after soldering		Reflow soldering profile Wave soldering profile	< 5 %	