Chip Temp. Sensing NTC Thermistor – SDNT Series

Operating Temp

- -40℃ ~+125℃

Features

- SMD type suitable for high density mounting
- Series of B constant for various Applications
- Excellent solder ability

Applications

- Mobile phones, wearable device such as smart watches, TWS headphones, etc.
- Office automation such as printer, facsimile,word processor, etc.
- Battery, CPU temperature protection

Product Identification

1	2	3	4	5	6	7	8	9
SDNT	1005	X	103	F	3380	F	T	F

1

Type	
SDNT	Chip NTC Thermistor

2

External Dimensions (L×W) (mm)	
0402 [01005]	0.4x0.2
0603 [0201]	0.6×0.3
1005 [0402]	1.0×0.5
1608 [0603]	1.6×0.8
2012 [0805]	2.0×1.25

3

Internal Code
X
C

4

Zero-power Resistance	
Example	Nominal Value
472	4.7kΩ
103	10kΩ

5

Tolerance of Resistance	
D	±0.5%
F	±1%
H	±3%
J	±5%

6

B Constant (25-50℃)	
Example	Nominal Value
3380	3380K
4250	4250K

7

Tolerance of B Constant	
D	±0.5%
F	±1%
H	±3%
J	±5%

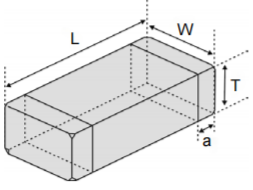
8

Packing	
T	Tape & Reel

9

Hazardous Substance Free Products
F

Shape and Dimensions



Unit: mm [inch]

Type	L	W	T	a
SDNT0402 [01005]	0.4±0.02 [.016±0.0008]	0.2±0.02 [.008±0.0008]	0.2±0.02 [.008±0.0008]	0.105±0.035 [.004±.0010]
SDNT0603 [0201]	0.6±0.05 [.024±.002]	0.3±0.05 [.012±.002]	0.3±0.05 [.012±.002]	0.15±0.05 [.006±.002]
SDNT1005 [0402]	1.0±0.15 [.039±.006]	0.5±0.15 [.020±.006]	0.5±0.15 [.020±.006]	0.25±0.1 [.010±.004]
SDNT1608 [0603]	1.6±0.15 [.063±.006]	0.8±0.15 [.031±.006]	0.8±0.15 [.031±.006]	0.3±0.2 [.012±.008]
SDNT2012 [0805]	2.0±0.2 [.079±.008]	1.25±0.2 [.049±.008]	0.85±0.2 [.033±.008]	0.5±0.3 [.020±.012]

Specifications

SDNT0402 TYPE

Part Number	Resistance at 25°C	B Constant (25-50°C)	Max. Permissive Operating Current (25°C)	Thermal Time Constant	Dissipation Factor	Rated Electric Power
Units	kΩ	K	mA	sec	mW/°C	mW
Symbol	R25	B25/50	Imax.	t	C	P
SDNT0402C103 □ 3380 ◎ TF	10	3380	0.31	<3 sec.	1.0	100
SDNT0402C683 □ 4250 ◎ TF	68	4250	0.12			
SDNT0402C104 □ 4250 ◎ TF	100	4250	0.10			
SDNT0402C474 □ 4250 ◎ TF	470	4250	0.04			

SDNT0603 TYPE

Part Number	Resistance at 25°C	B Constant (25-50°C)	Max. Permissive Operating Current (25°C)	Thermal Time Constant	Dissipation Factor	Rated Electric Power
Units	kΩ	K	mA	sec	mW/°C	mW
Symbol	R25	B25/50	Imax.	t	C	P
SDNT0603C103 □ 3380 ◎ TF	10	3380	0.31	<3 sec.	1.0	100
SDNT0603C103 □ 3950 ◎ TF	10	3950	0.31			
SDNT0603C223 □ 3380 ◎ TF	22	3380	0.21			
SDNT0603C473 □ 4050 ◎ TF	47	4050	0.14			
SDNT0603C683 □ 4250 ◎ TF	68	4250	0.12			
SDNT0603C104 □ 4250 ◎ TF	100	4250	0.10			
SDNT0603C224 □ 4250 ◎ TF	220	4250	0.06			
SDNT0603C474 □ 4250 ◎ TF	470	4250	0.04			

SDNT1005 TYPE

Part Number	Resistance at 25°C	B Constant (25-50°C)	Max. Permissive Operating Current (25°C)	Thermal Time Constant	Dissipation Factor	Rated Electric Power
Units	kΩ	K	mA	sec	mW/°C	mW
Symbol	R25	B25/50	Imax.	t	C	P
SDNT1005X682 □ 3850 ◎ TF	6.8	3850	0.38	<3 sec.	1.0	100
SDNT1005X103 □ 3380 ◎ TF	10	3380	0.31			
SDNT1005X103 □ 3435 ◎ TF	10	3435	0.31			
SDNT1005X103 □ 3950 ◎ TF	10	3950	0.33			
SDNT1005X103 □ 4050 ◎ TF	10	4050	0.33			
SDNT1005X153 □ 3450 ◎ TF	15	3450	0.25			
SDNT1005X223 □ 3950 ◎ TF	22	3950	0.23			
SDNT1005X303 □ 3950 ◎ TF	30	3950	0.15			
SDNT1005X303 □ 4050 ◎ TF	30	4050	0.15			
SDNT1005X333 □ 3950 ◎ TF	33	3950	0.15			
SDNT1005X333 □ 4050 ◎ TF	33	4050	0.15			
SDNT1005X473 □ 4050 ◎ TF	47	4050	0.12			
SDNT1005X473 □ 4100 ◎ TF	47	4100	0.12			
SDNT1005X503 □ 4050 ◎ TF	50	4050	0.12			
SDNT1005X503 □ 4100 ◎ TF	50	4100	0.12			
SDNT1005X683 □ 4150 ◎ TF	68	4150	0.11			
SDNT1005X104 □ 3950 ◎ TF	100	3950	0.10			
SDNT1005X104 □ 4150 ◎ TF	100	4150	0.10			
SDNT1005X104 □ 4250 ◎ TF	100	4250	0.10			
SDNT1005X154 □ 4250 ◎ TF	150	4250	0.08			
SDNT1005X224 □ 4250 ◎ TF	220	4250	0.06			
SDNT1005X224 □ 4350 ◎ TF	220	4350	0.06			

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Specifications

SDNT1608 TYPE

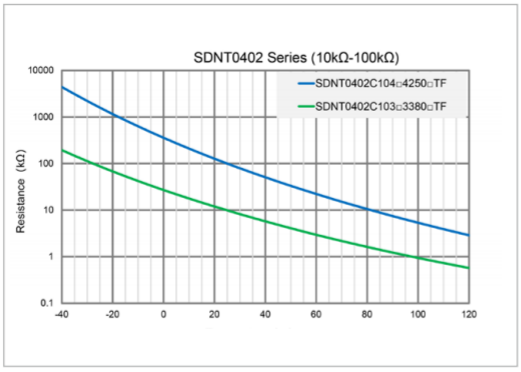
Part Number	Resistance at 25°C	B Constant (25-50°C)	Max. Permissive Operating Current (25°C)	Thermal Time Constant	Dissipation Factor	Rated Electric Power
Units	kΩ	K	mA	sec	mW/°C	mW
Symbol	R25	B25/50	Imax.	t	C	P
SDNT1608X222 □ 3450 ◎ TF	2.2	3450	0.67	<5 sec.	1.0	100
SDNT1608X472 □ 3850 ◎ TF	4.7	3850	0.46			
SDNT1608X502 □ 3850 ◎ TF	5	3850	0.44			
SDNT1608X103 □ 3380 ◎ TF	10	3380	0.31			
SDNT1608X103 □ 3435 ◎ TF	10	3435	0.31			
SDNT1608X103 □ 3450 ◎ TF	10	3450	0.31			
SDNT1608X103 □ 3950 ◎ TF	10	3950	0.33			
SDNT1608X103 □ 4000 ◎ TF	10	4000	0.33			
SDNT1608X153 □ 3950 ◎ TF	15	3950	0.25			
SDNT1608X223 □ 3950 ◎ TF	22	3950	0.21			
SDNT1608X223 □ 4050 ◎ TF	22	4050	0.21			
SDNT1608X333 □ 4050 ◎ TF	33	4050	0.17			
SDNT1608X473 □ 4050 ◎ TF	47	4050	0.14			
SDNT1608X473 □ 4150 ◎ TF	47	4150	0.14			
SDNT1608X503 □ 4050 ◎ TF	50	4050	0.13			
SDNT1608X503 □ 4150 ◎ TF	50	4150	0.13			
SDNT1608X683 □ 4150 ◎ TF	68	4150	0.12			
SDNT1608X104 □ 3950 ◎ TF	100	3950	0.10			
SDNT1608X104 □ 4250 ◎ TF	100	4250	0.10			
SDNT1608X124 □ 4250 ◎ TF	120	4250	0.10			
SDNT1608X154 □ 4300 ◎ TF	150	4300	0.08			
SDNT1608X224 □ 4300 ◎ TF	220	4300	0.06			

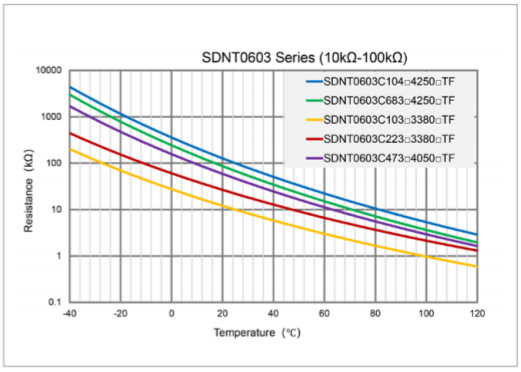
SDNT2012 TYPE

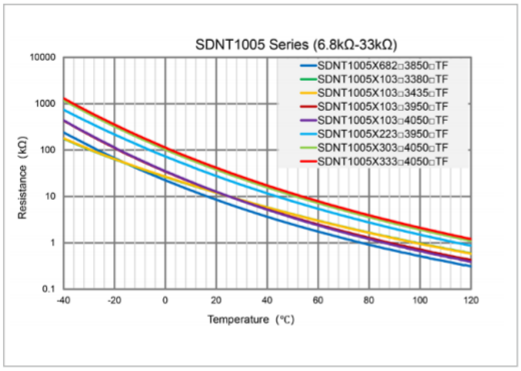
Part Number	Resistance at 25°C	B Constant (25-50°C)	Max. Permissive Operating Current (25°C)	Thermal Time Constant	Dissipation Factor	Rated Electric Power
Units	kΩ	K	mA	sec	mW/°C	mW
Symbol	R25	B25/50	Imax.	t	C	P
SDNT2012X472 □ 3850 ◎ TF	4.7	3850	0.65	<5 sec.	2.0	200
SDNT2012X502 □ 3950 ◎ TF	5	3950	0.60			
SDNT2012X103 □ 3450 ◎ TF	10	3450	0.40			
SDNT2012X103 □ 3950 ◎ TF	10	3950	0.44			
SDNT2012X153 □ 3950 ◎ TF	15	3950	0.33			
SDNT2012X223 □ 4050 ◎ TF	22	4050	0.31			
SDNT2012X303 □ 4050 ◎ TF	30	4050	0.25			
SDNT2012X333 □ 4050 ◎ TF	33	4050	0.24			
SDNT2012X473 □ 4050 ◎ TF	47	4050	0.20			
SDNT2012X473 □ 4150 ◎ TF	47	4150	0.20			
SDNT2012X503 □ 4050 ◎ TF	50	4050	0.18			
SDNT2012X503 □ 4150 ◎ TF	50	4150	0.18			
SDNT2012X104 □ 3950 ◎ TF	100	3950	0.14			
SDNT2012X104 □ 4250 ◎ TF	100	4250	0.14			
SDNT2012X154 □ 4350 ◎ TF	150	4350	0.11			
SDNT2012X224 □ 4350 ◎ TF	220	4350	0.08			

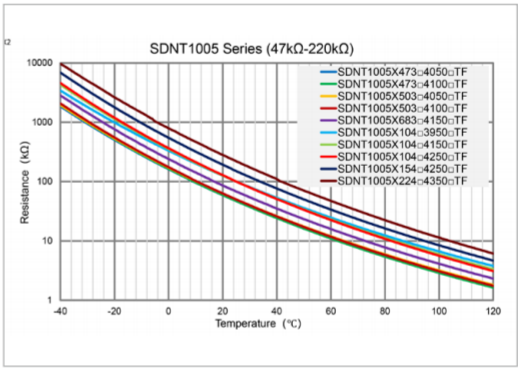
※ □ : Please specify the resistance tolerance code (D=±0.5%, F=±1%, H=±3%, J=±5%).
※ ◎ : Please specify the B value tolerance code (D=±0.5%, F=±1%, H=±3% J=±5%).
※ Products with other electrical characteristics can be provided upon customer's request. Please contact your local sales.

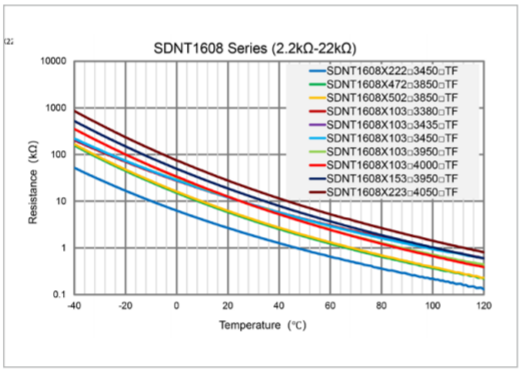
Typical Electrical Characteri-Stics

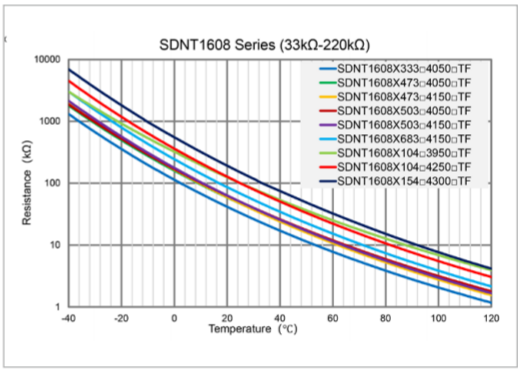


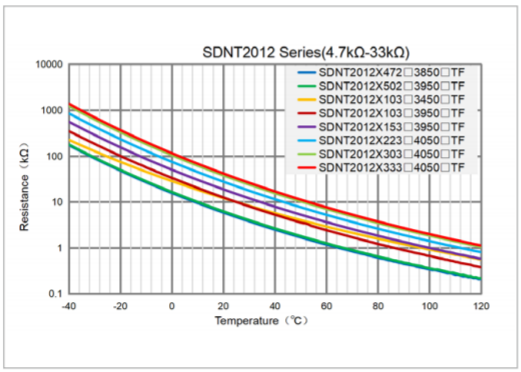


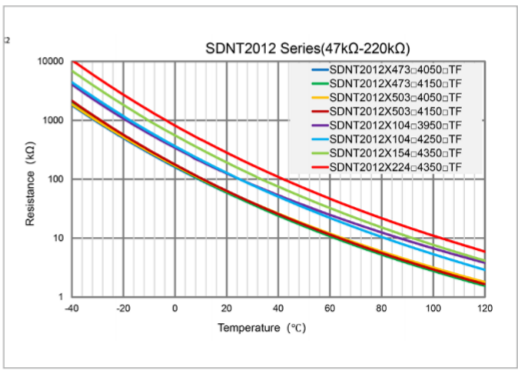












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