Sensing Thermistor (NTC-Chip)



ABNTC-0603

Request Samples | Check Inventory

1.6 x 0.8 x 0.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- Large B constant for high temperature sensing capability
- Designed for high density
- Available in standard EIA compatible case size
- Internal electrode designed for enhanced reliability
- Excellent aging stability

Applications

- Battery pack temperature sensing
- Power Supply and Power Electronics Thermal Monitoring
- Consumer electronics thermal management.
- Appliance temperature control.
- Motor winding protection.
- Industrial equipment and power electronics monitoring.

Electrical Specifications

Part Number	Resistance		B Constant 25/50		Maximum Operating Current	Thermal Time Constant	Thermal Dissipation Factor	Rated Power
Test Condition	25ºC		25ºC, 50ºC		25ºC	25ºC	25ºC	25ºC
Units	kΩ	±%	Kelvin	±%	mA	seconds	mW/ºC	mW
Symbol	R25	Δ	β	□	Imax	τ	δ	Pmax
ABNTC-0603-472Δ-3950□	4.7	H, J, K	3950	H	0.46	< 5	1.0	100
ABNTC-0603-502Δ-3950□	5.0	H, J, K	3950	H	0.44			
ABNTC-0603-682Δ-3950□	6.8	F, H, J, K	3950	F, H	0.38			
ABNTC-0603-103Δ-3450□	10	F, H, J, K	3450	F, H	0.31			
ABNTC-0603-103Δ-3950□	10	F, H, J, K	3950	F, H	0.33			
ABNTC-0603-153Δ-3950□	15	H, J, K	3950	F, H	0.25			
ABNTC-0603-223Δ-4050□	22	F, H, J, K	4050	H	0.21			
ABNTC-0603-333Δ-4050□	33	F, H, J, K	4050	F, H	0.17			
ABNTC-0603-473Δ-4150□	47	F, H, J, K	4150	F, H	0.14			
ABNTC-0603-503Δ-4150□	50	F, H, J, K	4150	F, H	0.13			
ABNTC-0603-683Δ-4150□	68	F, H, J, K	4150	F, H	0.12			
ABNTC-0603-104Δ-4250□	100	F, H, J, K	4250	F, H	0.10			

Operating Temperature: -55°C to +125°C
Storage: Temperature 10°C to +50°C, RH<75%

Test Conditions:

Unless otherwise specified, the standard atmospheric conditions for measurement/test as:

a. Ambient Temperature: 20±15℃
b. Relative Humidity: 65±20%
c. Air Pressure: 86 kPa to 106 kPa

ABNTC-0603 Series is RoHS/RoHS II Compliant and Pb free
MSL level = 1

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Bee Cave, TX 78738
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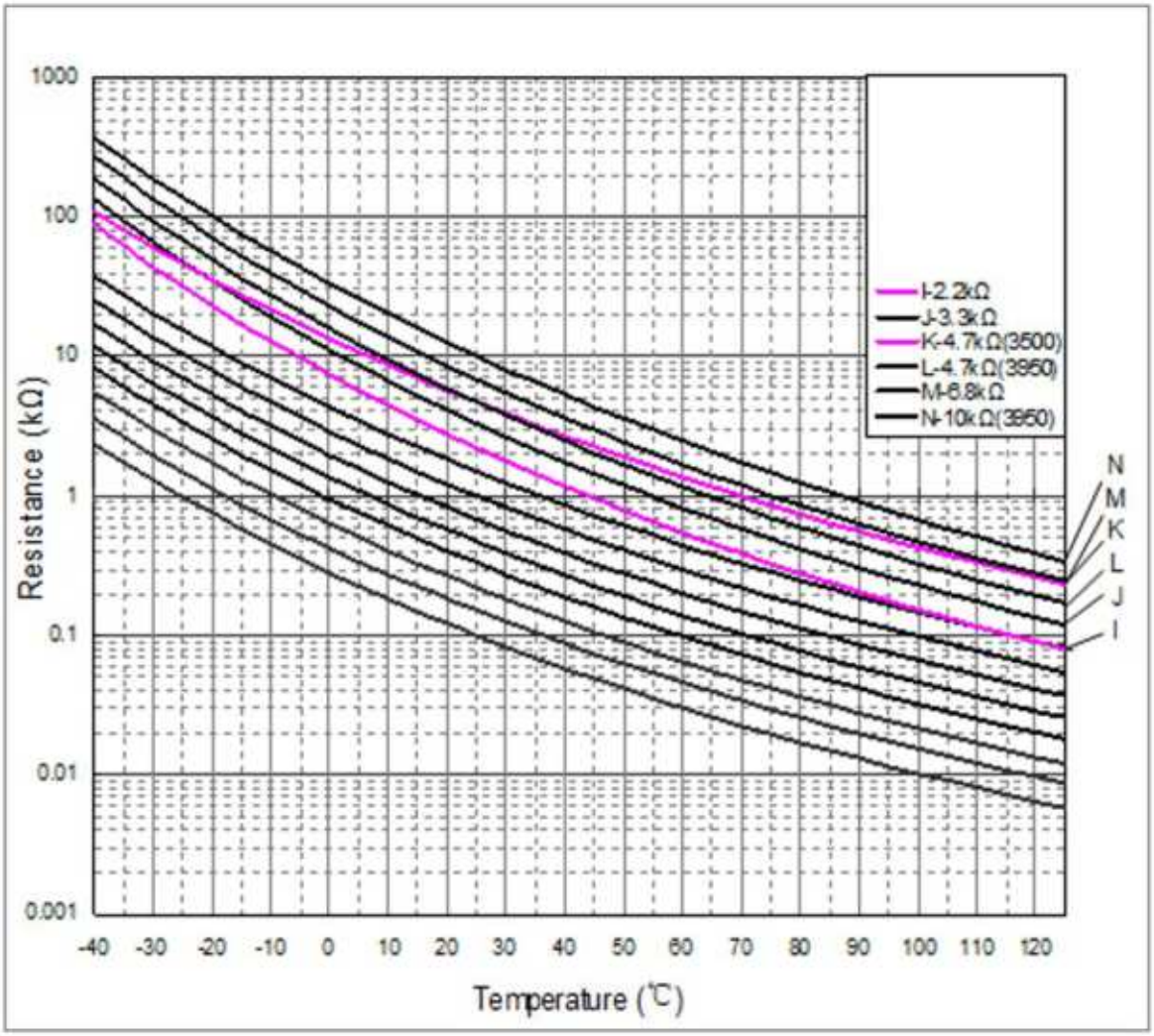


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Electrical Characteristics Curve



Resistance vs. Temperature

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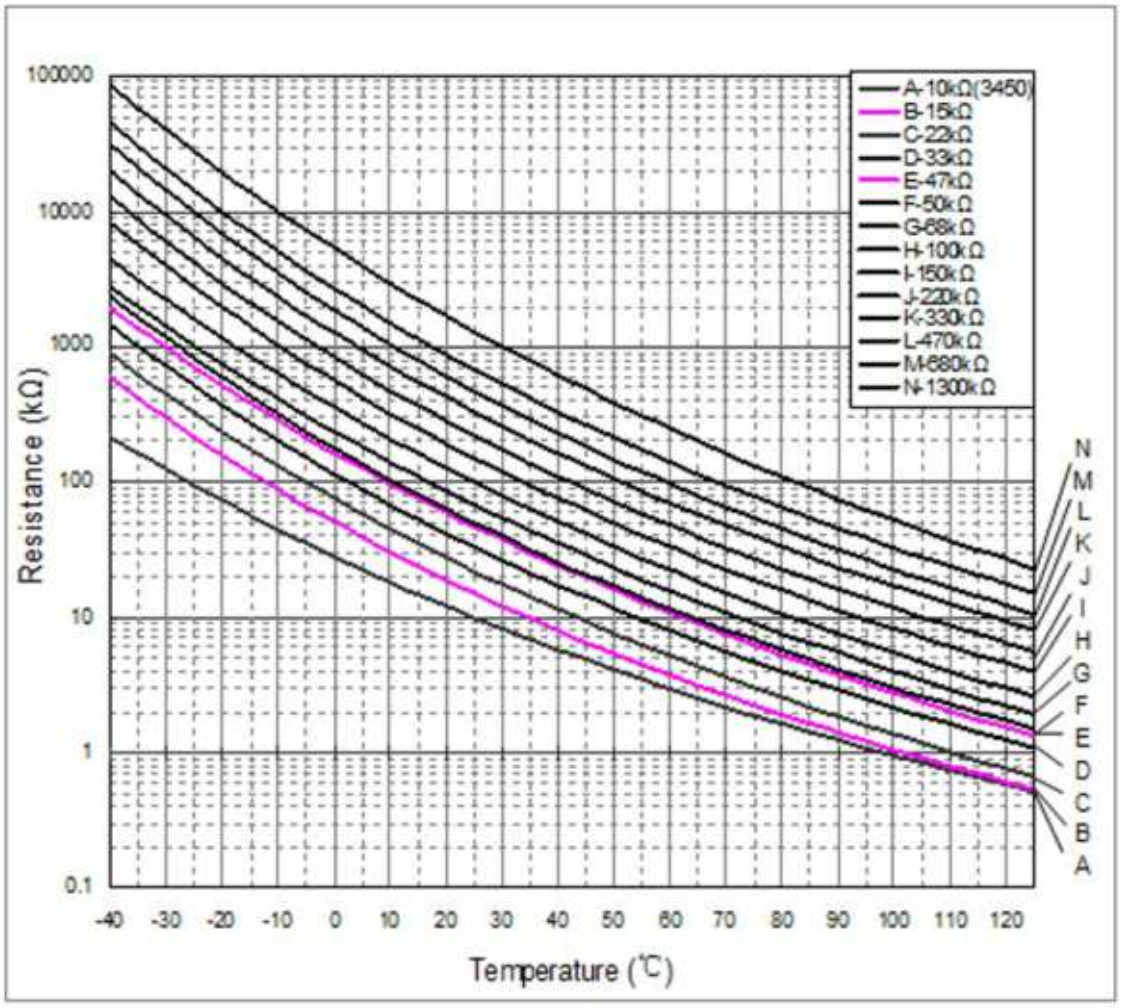


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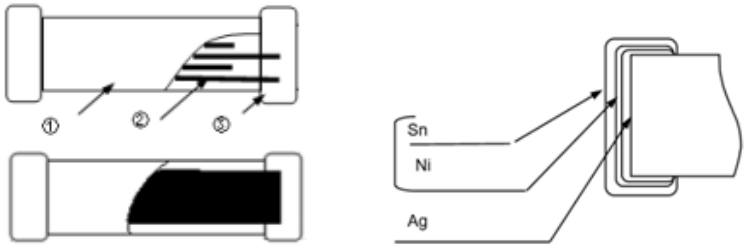


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Materials



	Part Name	Material
1	Base Material	MnO
2	Internal Conductor	Ag-Pd
3	Terminal Electrode	Ag (Inner layer) Ni-Sn (Outer layer)

Part Number Identification

ABNTC- ☐ - ☐ Δ - ☐ ☐ - ☐

Package Size [EIA]	R25 Code	R25 Tolerance	B Constant	B Tolerance	Packaging
i.e. 0603	See electrical Specifications table	F=±1% H=±3% J=±5% K=±10%	See electrical Specifications table	F=±1% H=±3%	T: Tape and Reel (refer to packaging section) B: Bulk

Part Marking

No Marking

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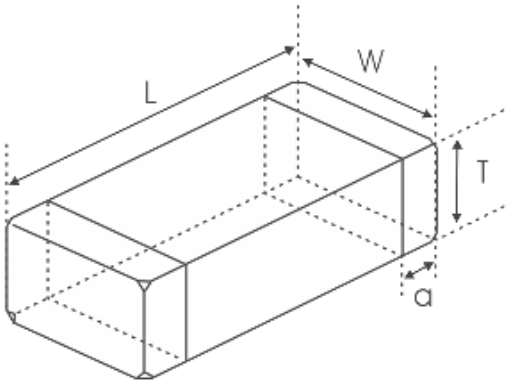


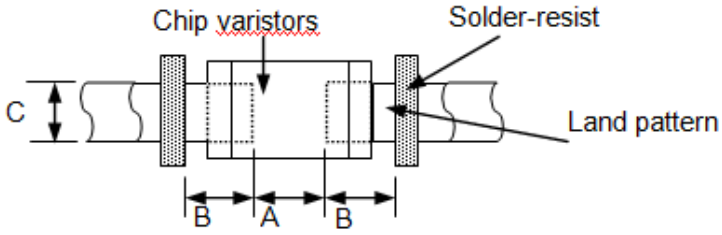
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Mechanical Specifications





Series	L	W	T	a	A	B	C
ABNTC-0603	1.6±0.15	0.8±0.15	0.8±0.15	0.3±0.2	0.60~0.80	0.60~0.80	0.60~0.80

Dimensions: mm

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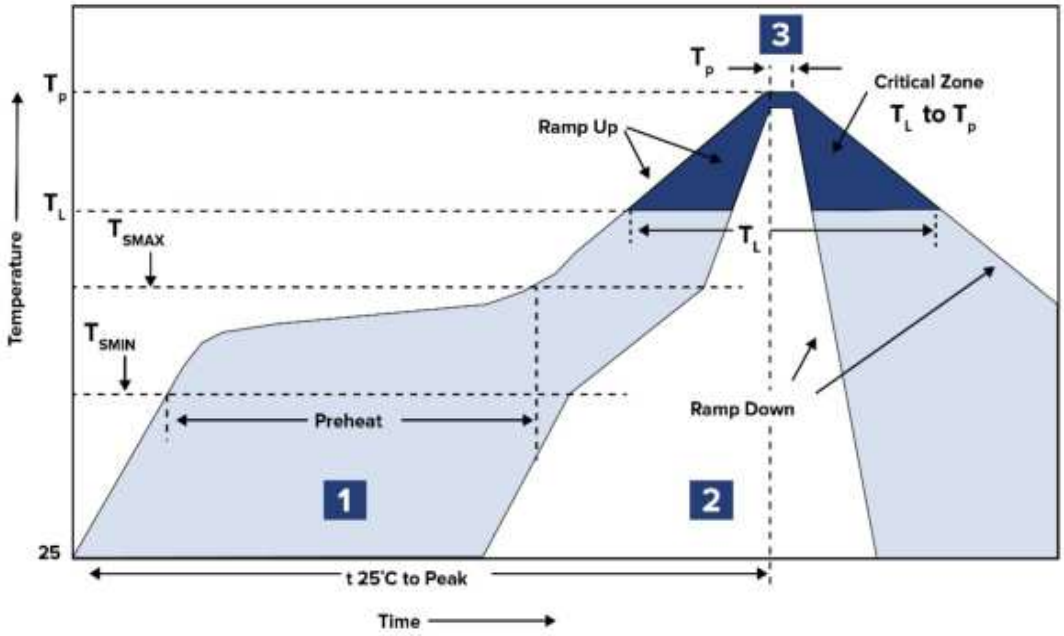


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Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	T_{SMIN} ~ T_{SMAX} 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T_L ≥217°C	60 ~ 90 sec.
3	Peak heat	T_P 260°C Max.	10 sec. MAX

Ref Paste: Sn/3.0Ag/0.5Cu (Lead-Free)
Max ramp up rate:3°C/Sec
Max ramp down rate:6°C/Sec
Maximum reflows: 2

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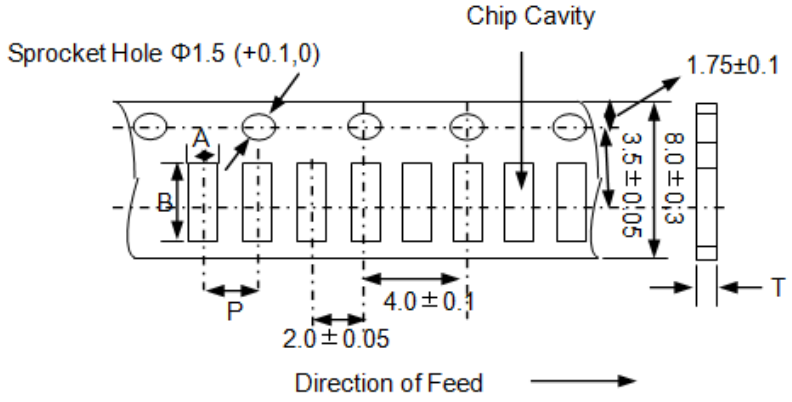
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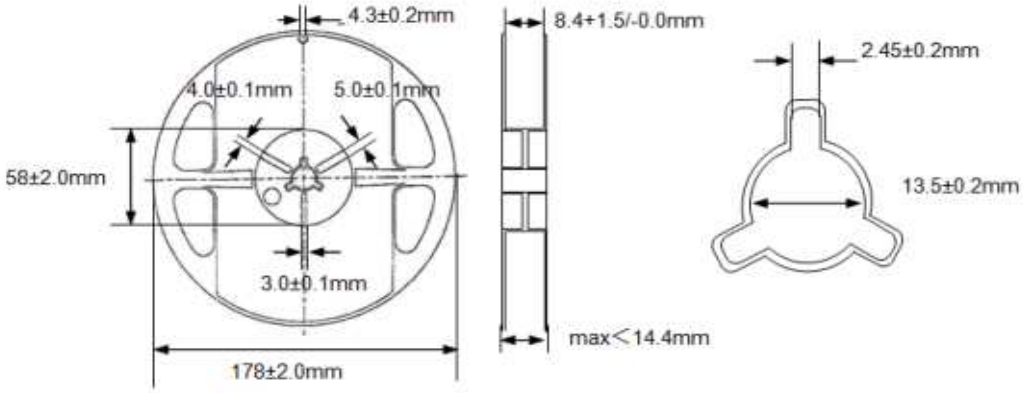
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MSL Level = 1

Packaging

Tape & Reel: 4,000 pcs/reel



A	B	P	T (max)
1.0±0.2	1.8±0.2	4.0±0.1	1.1



Dimensions: mm

ATTENTION: Abracon LLC's products are Commercial-Off-The-Shelf (COTS, which are designed, intended and validated for use in commercial, industrial and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.

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