

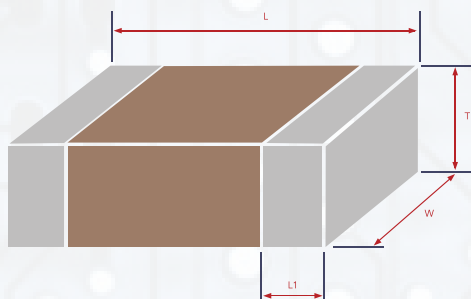
SMD THERMISTOR AUTOMOTIVE

- TSN SERIES -

FEATURES

- RoHS / Halogen-Free (HF) compliant
- Highly reliable structure
- Operating Temperature Range -40°C ~ +175°C
- Qualified based on AEC-Q200

DIMENSIONS



APPLICATIONS

- IT Equipment
- Mobile Devices
- Battery Packs
- Office Automation Equipment
- Automotive

TYPE (MM)	L (MM)	W (MM)	T (MAX) (MM)	L1 (MM)
TSN (0402)	1.00 ± 0.15	0.50 ± 0.15	0.50 ± 0.15	0.25 ± 0.10
TSN (0603)	1.60 ± 0.15	0.80 ± 0.15	0.80 ± 0.15	0.30 ± 0.20
TSN (0805)	2.00 ± 0.20	1.25 ± 0.20	0.85 ± 0.20	0.50 ± 0.30

PART NUMBER

TSN	0603	103	F	344	F	B
PRODUCT TYPE	SIZE	ZERO POWER RESISTANCE @25°C	TOLERANCE of R25	B VALUE	TOLERANCE OF B VALUE	DEFINITION OF B VALUE
TSN	04 - 0402 10 - 0603 21 - 0805	103 - 10KΩ 104 - 100KΩ	D: ± 0.5% E: ± 0.7% F: ± 1% G: ± 2% H: ± 3% J: ± 5% K: ± 10%	344 = 3435K 405 = 4050K	D: ± 0.5% E: ± 0.7% F: ± 1% G: ± 2% H: ± 3% J: ± 5%	A: 25/25 B: 25/28 C: 25/100

ELECTRICAL CHARACTERISTICS

PART NUMBER	ZERO POWER RESISTANCE AT 25 °C	TOL. OF R25	B 25/50 VALUE	TOL OF B VALUE	DISSIPATION FACTOR	THERMAL TIME CONSTANT	MAX POWER RATING AT 25°C
	R 25 (Ω)	±(%)	(K)	(± %)	_ (mW / °C)	T (sec.)	(mW)
TSN0402103(X)338(Y)A	10,000	10,5,3,2,1	3380	5,3,2,1	Approx. 1.7	Approx. 3.0	170
TSN0402473(X)395(Y)A	47,000	10,5,3,2,1	3950	5,3,2,1	Approx. 1.7	Approx. 3.0	170
TSN0402104(X)405(Y)A	100,000	10,5,3,2,1	4050	5,3,2,1	Approx. 1.7	Approx. 3.0	170
TSN0402104(X)420(Y)A	100,000	10,5,3,2,1	4200	5,3,2,1	Approx. 1.7	Approx. 3.0	170
TSN0402104(X)425(Y)A	100,000	10,5,3,2,1	4250	5,3,2,1	Approx. 1.7	Approx. 3.0	170
TSN0603103(X)338(Y)A	10,000	10,5,3,2,1	3380	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603103(X)344(Y)A	10,000	10,5,3,2,1	3435	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603103(X)395(Y)A	10,000	10,5,3,2,1	3950	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603473(X)390(Y)A	47,000	10,5,3,2,1	3900	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603473(X)405(Y)A	47,000	10,5,3,2,1	4050	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603104(X)395(Y)A	100,000	10,5,3,2,1	3950	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603104(X)420(Y)A	100,000	10,5,3,2,1	4200	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603104(X)425(Y)A	100,000	10,5,3,2,1	4250	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603104(X)436(Y)A	100,000	10,5,3,2,1	4360	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603104(X)440(Y)A	100,000	10,5,3,2,1	4400	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSC0805103(X)390(Y)A	10,000	10,5,3,2,1	3900	5,3,2,1	Approx. 2.4	Approx. 7.5	240
TSC0805473(X)390(Y)A	47,000	10,5,3,2,1	3900	5,3,2,1	Approx. 2.4	Approx. 7.5	240
TSC0805104(X)395(Y)A	100,000	10,5,3,2,1	3950	5,3,2,1	Approx. 2.4	Approx. 7.5	240
TSC0805104(X)405(Y)A	100,000	10,5,3,2,1	4050	5,3,2,1	Approx. 2.4	Approx. 7.5	240
TSC0805104(X)420(Y)A	100,000	10,5,3,2,1	4200	5,3,2,1	Approx. 2.4	Approx. 7.5	240
TSC0805104(X)425(Y)A	100,000	10,5,3,2,1	4250	5,3,2,1	Approx. 2.4	Approx. 7.5	240

(X): R TOLERANCE | (Y) B VALUE TOLERANCE



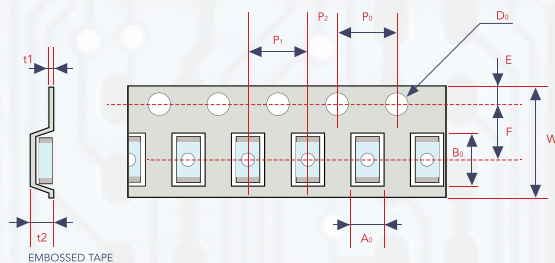
ELECTRICAL CHARACTERISTICS

PART NUMBER	ZERO POWER RESISTANCE AT 25 ° C	TOL. OF R25	B 25/50 VALUE	TOL OF B VALUE	DISSIPATION FACTOR	THERMAL TIME CONSTANT	MAX POWER RATING AT 25°C
	R 25 (Ω)	±(%)	(K)	(± %)	_ (mW / °C)	T (sec.)	(mW)
TSN0402103(X)344(Y)B	10,000	10,5,3,2,1	3435	5,3,2,1	Approx. 1.7	Approx. 3.0	170
TSN0402473(X)405(Y)B	47,000	10,5,3,2,1	4050	5,3,2,1	Approx. 1.7	Approx. 3.0	170
TSN0402104(X)410(Y)B	100,000	10,5,3,2,1	4100	5,3,2,1	Approx. 1.7	Approx. 3.0	170
TSN0402104(X)430(Y)B	100,000	10,5,3,2,1	4300	5,3,2,1	Approx. 1.7	Approx. 3.0	170
TSN0603103(X)344(Y)B	10,000	10,5,3,2,1	3435	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603103(X)361(Y)B	10,000	10,5,3,2,1	3610	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603103(X)399(Y)B	10,000	10,5,3,2,1	3990	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603473(X)395(Y)B	47,000	10,5,3,2,1	3950	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603473(X)410(Y)B	47,000	10,5,3,2,1	4100	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603104(X)398(Y)B	100,000	10,5,3,2,1	3980	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603104(X)405(Y)B	100,000	10,5,3,2,1	4050	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603104(X)410(Y)B	100,000	10,5,3,2,1	4100	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603104(X)430(Y)B	100,000	10,5,3,2,1	4300	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603104(X)436(Y)B	100,000	10,5,3,2,1	4360	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603104(X)440(Y)B	100,000	10,5,3,2,1	4400	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603104(X)449(Y)B	100,000	10,5,3,2,1	4490	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0603204(X)406(Y)B	200000	10,5,3,2,1	4060	5,3,2,1	Approx. 2.1	Approx. 3.1	210
TSN0805103(X)344(Y)B	10,000	10,5,3,2,1	3435	5,3,2,1	Approx. 2.4	Approx. 7.5	240
TSN0805103(X)394(Y)B	10,000	10,5,3,2,1	3940	5,3,2,1	Approx. 2.4	Approx. 7.5	240
TSN0805473(X)395(Y)B	47,000	10,5,3,2,1	3950	5,3,2,1	Approx. 2.4	Approx. 7.5	240
TSN0805104(X)398(Y)B	100,000	10,5,3,2,1	3980	5,3,2,1	Approx. 2.4	Approx. 7.5	240
TSN0805104(X)405(Y)B	100,000	10,5,3,2,1	4050	5,3,2,1	Approx. 2.4	Approx. 7.5	240
TSN0805104(X)410(Y)B	100,000	10,5,3,2,1	4100	5,3,2,1	Approx. 2.4	Approx. 7.5	240
TSN0805104(X)430(Y)B	100,000	10,5,3,2,1	4300	5,3,2,1	Approx. 2.4	Approx. 7.5	240

(X): R TOLERANCE | (Y) B VALUE TOLERANCE

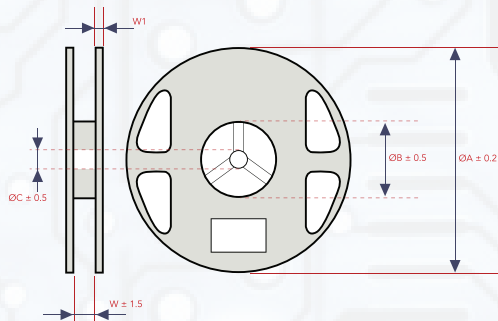


PACKING



UNIT: MM

SIZE	A ₀ ± 0.1	B ₀ ± 0.1	E	F	W	P ₀	P ₁ ± 0.1	P ₂	t1 / t2	D ₁	QTY / REEL (PCS)
TSN (0402)	0.65	1.15	1.75 ± 0.1	3.5 ± 0.05	8 ± 0.03	4 ± 0.1	4	2.0 ± 0.05	1.0 MAX / 1.1 MAX	Ø1.55 ± 0.05	10000
TSN (0603)	1.10	1.90	1.75 ± 0.1	3.5 ± 0.05	8 ± 0.03	4 ± 0.1	4	2.0 ± 0.05	1.0 MAX / 1.1 MAX	Ø1.55 ± 0.05	4000
TSN (0805)	1.50	2.35	1.75 ± 0.1	3.5 ± 0.05	8 ± 0.03	4 ± 0.1	4	2.0 ± 0.05	1.0 MAX / 1.1 MAX	Ø1.55 ± 0.05	4000



UNIT: MM

SIZE	A ± 2.0	B ± 0.5	C ± 0.5	W ± 1.5	W ₁
TSN (0402)	178	60	13	10	1.6
TSN (0603)	178	60	13	10	1.6
TSN (0805)	178	60	13	10	1.6

