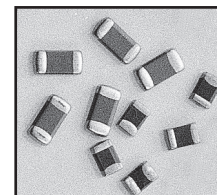


FEATURES

- NEGATIVE TEMPERATURE COEFFICIENT
- FAST RESPONSE TO TEMPERATURE VARIATIONS MAKE THEM IDEALLY FOR TEMPERATURE SENSORS AND COMPENSATORS
- STANDARD EIA 0201, 0402, 0603 AND 0805 SIZES
- TAPE AND REEL FOR AUTOMATIC MOUNTING

RoHS
Compliant
includes all homogeneous materials



*See Part Number System for Details

CHARACTERISTICS AND PERFORMANCE

Series	NST02	NST04	NST06	NST10
EIA Size	0201	0402	0603	0805
Resistance Range (+25°C)	10KΩ ~ 100KΩ	6.8KΩ ~ 220KΩ	2.2KΩ ~ 220KΩ	4.7KΩ ~ 220KΩ
Power Rating (+25°C)	100mW	100mW	100mW	200mW
Resistance Tolerance (+25°C)	F = 1%, H = ±3%, J = ±5%, K = ±10%			
Operating Temperature Range	-55°C ~ 125°C			
Dissipation Factor	1mW/°C	1mW/°C	1mW/°C	2mW/°C
Thermal Time Constant	<3 Sec.	<3 Sec.	<5 Sec.	<5 Sec.
Beta Temperature Range	D = +25°C ~ +50°C			
Beta Value Range	3380 ~ 4250	3950 ~ 4250	3450 ~ 4350	3950 ~ 4350
Beta Value Tolerance	F = 1%, H = ±3%			
Resistance to Soldering Heat +260°C for 5 seconds	Resistance Change ΔR ±1% for F tolerance parts ΔR ±3% for H tolerance parts ΔR ±5% for J & K tolerance parts Beta Change ΔBeta ±1% for F Beta tolerance parts ΔBeta ±3% for H Beta tolerance parts			
Damp Heat 1000hrs @ +60°C, 90~95%RH				
Thermal Shock -55°C (30 min.), within 20 seconds to +125°C (30 min.), 100 cycles				
Life Test 1,000hrs @ +85°C with maximum operating current applied				
High Temperature Storage 1000hrs @ +125°C, 90~95%RH				

DIMENSIONS (mm)

Series	EIA Size	L	W	T	P
NST02	0201	0.60 ± 0.05	0.30 ± 0.05	0.30 ± 0.05	0.15 ± 0.05
NST04	0402	1.00 ± 0.15	0.50 ± 0.15	0.50 ± 0.15	0.25 ± 0.10
NST06	0603	1.60 ± 0.15	0.80 ± 0.15	0.80 ± 0.15	0.30 ± 0.20
NST10	0805	2.00 ± 0.20	1.25 ± 0.20	0.85 ± 0.20	0.50 ± 0.30

[Link: RT Tables](#)

TOP VIEW



SIDE VIEW



Termination Material
Ag Base
Ni Barrier
100% Sn Finish

PART NUMBER SYSTEM

NST06 D J 103 H 345 TR F

- Series
- Beta Temperature Range: D = +25°C ~ +50°C
- Resistance Value Code (E-24 Standard Values)
- Resistance Value Tolerance: F = ±1%, H = ±3%, J = ±5%, K = ±10%
- Beta Value Tolerance: F = ±1%, H = ±3%
- Beta Value
- Packaging TR: Tape and Reel
- RoHS compliant

Beta Temperature Range 25/50	Beta Value									
	3380	3450	3500	3950	4050	4100	4150	4250	4300	4350
Beta over 25/85	3434	3500	3550	3987	4108	4150	4209	4311	4350	4400
Beta over 25/100	3455	3550	3590	3998	4131	4200	4232	4334	4400	4450
Beta over 25/105	3470	3600	3640	4000	4150	4220	4250	4350	4420	4470



NST02 (0201 CASE SIZE) STANDARD VALUES AND SPECIFICATIONS

NST04 Part Number	Resistance Value +25°C	Beta Value (B25/50)	Maximum Operating Current (mA)	Thermal Time Constant (sec.)	Dissipation Factor (mW/°C)	Rated Power (mW)
NST02D_103_338TRF	10K	3380	0.31	<3sec	1	100
NST02D_223_338TRF	22K	3380	0.22			
NST02D_473_338TRF	47K	3380	0.14			
NST02D_683_338TRF	68K	3380	0.12			
NST02D_104_415TRF	100K	4150	0.10			
NST02D_104_425TRF	100K	4250	0.10			

After D beta temperature range code: _ Insert resistance tol. code (F=1%, H=±3%, J=±5%, K=±10%)

After nominal resistance value: _ Insert beta tolerance code (F = 1%, H = ±3%)

NST04 (0402 CASE SIZE) STANDARD VALUES AND SPECIFICATIONS

NST04 Part Number	Resistance Value +25°C	Beta Value (B25/50)	Maximum Operating Current (mA)	Thermal Time Constant (sec.)	Dissipation Factor (mW/°C)	Rated Power (mW)
NST04D_682_395TRF	6.8K	3950	0.38	<3sec	1	100
NST04D_103_338TRF	10K	3380	0.31			
NST04D_103_395TRF	10K	3950	0.33			
NST04D_103_405TRF	10K	4050	0.33			
NST04D_153_345TRF	15K	3450	0.25			
NST04D_223_395TRF	22K	3950	0.23			
NST04D_303_395TRF	30K	3950	0.16			
NST04D_303_405TRF	30K	4050	0.15			
NST04D_333_395TRF	33K	3950	0.15			
NST04D_333_405TRF	33K	4050	0.15			
NST04D_473_395TRF	47K	3950	0.12			
NST04D_473_410TRF	47K	4100	0.12			
NST04D_503_410TRF	50K	4100	0.12			
NST04D_683_415TRF	68K	4150	0.11			
NST04D_104_415TRF	100K	4150	0.10			
NST04D_104_425TRF	100K	4250	0.10			
NST04D_154_415TRF	150K	4150	0.08			
NST04D_204_425TRF	200K	4250	0.06			
NST04D_224_425TRF	220K	4250	0.06			

After D beta temperature range code: _ Insert resistance tol. code (F=1%, H=±3%, J=±5%, K=±10%)

After nominal resistance value: _ Insert beta tolerance code (F = 1%, H = ±3%)

Contact NIC regarding availability of resistance and beta values not shown.



NST06 (0603 CASE SIZE) STANDARD VALUES AND SPECIFICATIONS

NST04 Part Number	Resistance Value +25°C	Beta Value (B25/50)	Maximum Operating Current (mA)	Thermal Time Constant (sec.)	Dissipation Factor (mW/°C)	Rated Power (mW)
NST06D_222_345TRF	2.2K	3450	0.67	<5sec	1	100
NST06D_472_395TRF	4.7K	3950	0.46			
NST06D_502_395TRF	5K	3950	0.44			
NST06D_103_338TRF	10K	3380	0.31			
NST06D_103_345TRF	10K	3450	0.31			
NST06D_103_395TRF	10K	3950	0.33			
NST06D_153_395TRF	15K	3950	0.25			
NST06D_223_405TRF	22K	4050	0.21			
NST06D_303_405TRF	30K	4050	0.17			
NST06D_333_405TRF	33K	4050	0.17			
NST06D_473_415TRF	47K	4150	0.14			
NST06D_503_415TRF	50K	4150	0.13			
NST06D_683_415TRF	68K	4150	0.12			
NST06D_104_395TRF	100K	3950	0.10			
NST06D_104_425TRF	100K	4250	0.10			
NST06D_124_425TRF	120K	4250	0.10			
NST06D_154_425TRF	150K	4250	0.08			
NST06D_204_435TRF	200K	4350	0.06			
NST06D_224_435TRF	220K	4350	0.06			

After D beta temperature range code: _ Insert resistance tol. code (F=1%, H=±3%, J=±5%, K=±10%)

After nominal resistance value: _ Insert beta tolerance code (F = 1%, H = ±3%)

NST10 (0805 CASE SIZE) STANDARD VALUES AND SPECIFICATIONS

NST04 Part Number	Resistance Value +25°C	Beta Value (B25/50)	Maximum Operating Current (mA)	Thermal Time Constant (sec.)	Dissipation Factor (mW/°C)	Rated Power (mW)
NST10D_472_395TRF	4.7K	3950	0.65	<5sec	2	200
NST10D_502_395TRF	5K	3950	0.60			
NST10D_103_338TRF	10K	3380	0.40			
NST10D_103_345TRF	10K	3450	0.40			
NST10D_103_395TRF	10K	3950	0.44			
NST10D_223_405TRF	22K	4050	0.31			
NST10D_303_405TRF	30K	4050	0.24			
NST10D_333_405TRF	33K	4050	0.24			
NST10D_473_415TRF	47K	4150	0.20			
NST10D_503_415TRF	50K	4150	0.18			
NST10D_104_425TRF	100K	4250	0.14			
NST10D_124_425TRF	120K	4250	0.14			
NST10D_154_430TRF	150K	4300	0.11			
NST10D_204_435TRF	200K	4350	0.08			
NST10D_224_435TRF	220K	4350	0.08			

After D beta temperature range code: _ Insert resistance tol. code (F=1%, H=±3%, J=±5%, K=±10%)

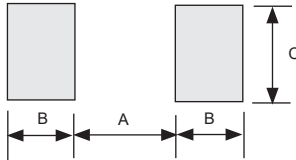
After nominal resistance value: _ Insert beta tolerance code (F = 1%, H = ±3%)

Contact NIC regarding availability of resistance and beta values not shown.

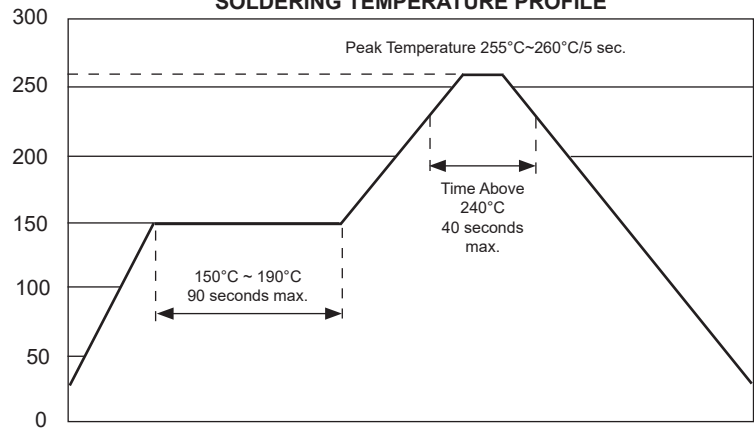


LAND PATTERN DIMENSIONS (mm)

Type	A	B	C
NST02	0.20 ~ 0.30	0.20 ~ 0.30	0.30 ~ 0.35
NST04	0.45 ~ 0.55	0.40 ~ 0.50	0.45 ~ 0.55
NST06	0.60 ~ 0.80	0.60 ~ 0.80	0.60 ~ 0.80
NST10	0.80 ~ 1.20	0.80 ~ 1.20	0.90 ~ 1.60

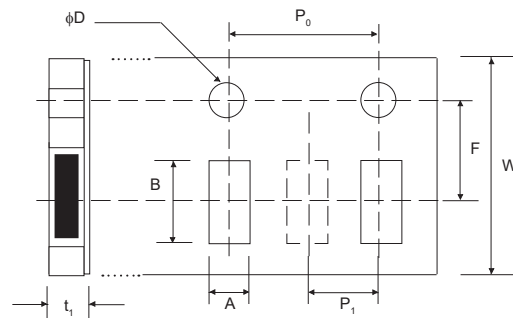


RECOMMENDED REFLOW SOLDERING TEMPERATURE PROFILE



CARRIER TAPE DIMENSIONS (mm)

Type	A	B	W	F	E	P ₁	P ₀	φD	T ₁
NST02	0.40 ± 0.10	0.70 ± 0.10	8.00 ± 0.30	3.50 ± 0.05	1.75 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	1.5 +0.1/-0	0.55 max.
NST04	0.65 ± 0.05	1.15 ± 0.05				4.00 ± 0.10			0.80 max.
NST06	1.00 ± 0.10	1.80 ± 0.10							
NST10	1.50 ± 0.10	2.30 ± 0.10							1.10 max.



REEL DIMENSIONS (mm) AND QUANTITY

Type	A ± 2.0	B ± 2.0	C ± 0.20	W ± 1.5	Quantity
NST02	178	58	13.5	9.0	15,000
NST04					10,000
NST06					4,000
NST10					

