

FEATURES

- CURRENT RATINGS UP TO 5.5 AMPS
- SURFACE MOUNTABLE CONSTRUCTION
- LOW PROFILE (3.2mm ~ 4.9mm MAXIMUM HEIGHT)
- TAPED AND REELED FOR AUTOMATIC INSERTION
- FOR USE IN DC/DC CONVERTERS

RoHS Compliant
includes all homogeneous materials

*See Part Number System for Details



CHARACTERISTICS

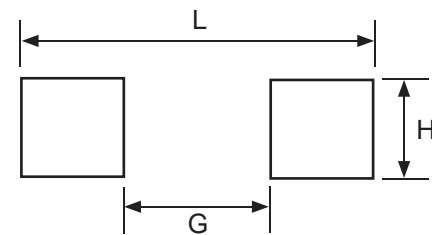
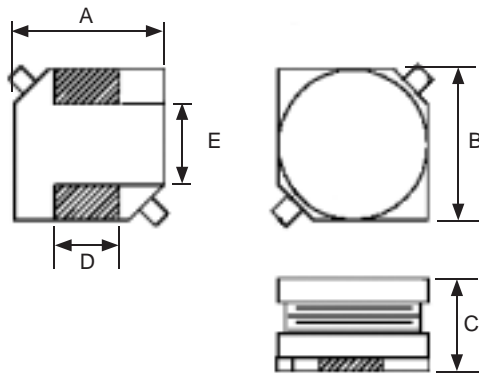
Case Size	NPI63T	NPI64T	NPI65T	NPI73T	NPI75T	NPI103T	NPI104T
Inductance Range	1.2 ~ 1,000 μ H			1.0 ~ 1,000 μ H		1.8 ~ 1,000 μ H	
Inductance Tolerance	\pm 10% (K) & \pm 20% (M)			\pm 10% (K), \pm 15% (L) & \pm 20% (M)			
Operating Temperature Range	-40°C ~ +105°C						
Inductance Change at Isat	-10% max.						
Temperature Rise at Irms	+40°C max.						
Resistance to Solder Heat	260°C for 10 seconds (Inductance change \pm 10% max.)						

CASE DIMENSIONS (mm)

Series	A	B	C	D	E	F
NPI63T	6.0 \pm 0.3	6.0 \pm 0.3	2.9 \pm 0.3	2.0 \pm 0.2	1.5 \pm 0.2	3.0 \pm 0.2
NPI64T	6.0 \pm 0.3	6.0 \pm 0.3	3.9 \pm 0.3			
NPI65T	6.0 \pm 0.3	6.0 \pm 0.3	4.9 \pm 0.3			
NPI73T	7.0 \pm 0.3	7.0 \pm 0.3	3.0 \pm 0.3			
NPI75T	7.0 \pm 0.3	7.0 \pm 0.3	4.6 \pm 0.3			
NPI103T	10.0 \pm 0.3	10.0 \pm 0.3	3.0 \pm 0.3	2.4 \pm 0.2	2.0 \pm 0.2	4.0 \pm 0.2
NPI104T	10.0 \pm 0.3	10.0 \pm 0.3	4.6 \pm 0.3			6.0 \pm 0.2

LAND PATTERN DIMENSIONS (mm)

Series	L	G	H
NPI63T	6.6	2.8	2.2
NPI64T			
NPI65T			
NPI73T	7.5	3.7	2.2
NPI75T			
NPI103T	10.7	5.7	2.8
NPI104T			

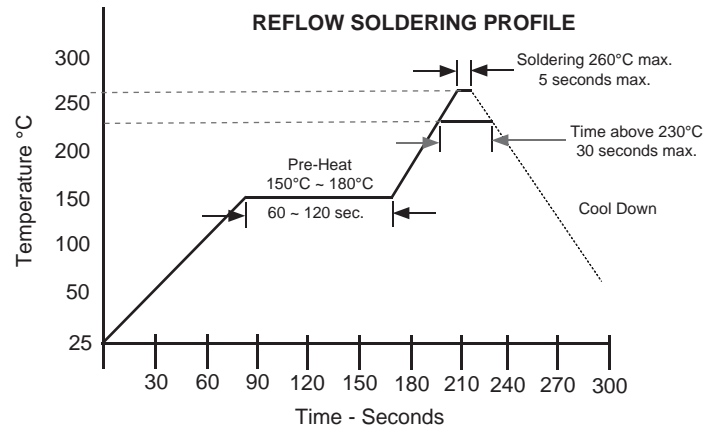


PART NUMBER SYSTEM

NPI 64 T 220 M TR F

- Termination Finish:
F = RoHS Compliant/Pb-free (100%Sn)
- Packaging: TR = Tape & Reel
- Inductance Tolerance Code: M= \pm 20%
- Inductance Code (μ H): 1st two digits are significant, 3rd digit is multiplier for values from 10 μ H and up.
- Construction Code (see drawing for details)
- Size Code (see table for details)
- Series

REFLOW SOLDERING PROFILE



Part Number	STANDARD VALUES - 63 CASE SIZE (6.0 x 6.0 x 2.9mm)			Test Frequency
	Inductance Value (µH)	DC Resistance (Ω)	DC Current Isat/Irms (Amps)	
NPI63T1R2MTRF	1.2 ± 20%	0.025	2.8	100KHz
NPI63T1R5MTRF	1.5 ± 20%	0.028	2.6	
NPI63T2R2MTRF	2.2 ± 20%	0.030	2.3	
NPI63T3R3MTRF	3.3 ± 20%	0.055	2	
NPI63T4R7MTRF	4.7 ± 20%	0.065	1.85	
NPI63T6R8MTRF	6.8 ± 20%	0.090	1.65	
NPI63T100MTRF	10 ± 20%	0.115	1.45	
NPI63T120MTRF	12 ± 20%	0.15	1.2	
NPI63T150MTRF	15 ± 20%	0.18	1.15	
NPI63T180MTRF	18 ± 20%	0.23	1.05	
NPI63T220MTRF	22 ± 20%	0.25	1	
NPI63T270MTRF	27 ± 20%	0.35	0.95	
NPI63T330KTRF	33 ± 10%	0.38	0.9	
NPI63T390KTRF	39 ± 10%	0.41	0.8	
NPI63T470KTRF	47 ± 10%	0.43	0.75	
NPI63T560KTRF	56 ± 10%	0.62	0.7	
NPI63T680KTRF	68 ± 10%	0.71	0.6	
NPI63T820KTRF	82 ± 10%	0.73	0.5	
NPI63T101KTRF	100 ± 10%	1.05	0.48	
NPI63T121KTRF	120 ± 10%	1.18	0.45	
NPI63T151KTRF	150 ± 10%	1.80	0.4	
NPI63T181KTRF	180 ± 10%	1.95	0.35	
NPI63T221KTRF	220 ± 10%	2.96	0.3	
NPI63T271KTRF	270 ± 10%	3.45	0.28	
NPI63T331KTRF	330 ± 10%	3.8	0.26	
NPI63T391KTRF	390 ± 10%	4.0	0.24	
NPI63T471KTRF	470 ± 10%	4.4	0.22	
NPI63T561KTRF	560 ± 10%	6.2	0.2	
NPI63T681KTRF	680 ± 10%	6.8	0.18	
NPI63T821KTRF	820 ± 10%	12.0	0.16	
NPI63T102KTRF	1000 ± 10%	13.5	0.14	

Maximum +40°C temperature rise at Irms. Maximum -10% inductance change at Isat.



Part Number	STANDARD VALUES - 64 CASE SIZE (6.0 x 6.0 x 3.9mm)			
	Inductance Value (μH)	DC Resistance (Ω)	DC Current Isat/Irms (Amps)	Test Frequency
NPI64T1R2MTRF	1.2 ± 20%	0.025	3.00	100KHz
NPI64T1R8MTRF	1.8 ± 20%	0.030	2.85	
NPI64T2R2MTRF	2.2 ± 20%	0.035	2.65	
NPI64T3R3MTRF	3.3 ± 20%	0.040	2.35	
NPI64T4R7MTRF	4.7 ± 20%	0.045	2.15	
NPI64T6R8MTRF	6.8 ± 20%	0.060	1.85	
NPI64T100MTRF	10 ± 20%	0.085	1.60	
NPI64T120MTRF	12 ± 20%	0.09	1.50	
NPI64T150MTRF	15 ± 20%	0.11	1.45	
NPI64T180MTRF	18 ± 20%	0.12	1.30	
NPI64T220MTRF	22 ± 20%	0.16	1.25	
NPI64T270MTRF	27 ± 20%	0.19	1.10	
NPI64T330KTRF	33 ± 10%	0.28	1.00	
NPI64T390KTRF	39 ± 10%	0.30	0.90	
NPI64T470KTRF	47 ± 10%	0.33	0.85	
NPI64T560KTRF	56 ± 10%	0.41	0.80	
NPI64T680KTRF	68 ± 10%	0.45	0.70	
NPI64T820KTRF	82 ± 10%	0.60	0.60	
NPI64T101KTRF	100 ± 10%	0.66	0.55	
NPI64T121KTRF	120 ± 10%	0.72	0.50	
NPI64T151KTRF	150 ± 10%	1.05	0.45	
NPI64T181KTRF	180 ± 10%	1.15	0.40	
NPI64T221KTRF	220 ± 10%	1.25	0.35	
NPI64T271KTRF	270 ± 10%	1.80	0.30	
NPI64T331KTRF	330 ± 10%	1.95	0.28	
NPI64T391KTRF	390 ± 10%	2.78	0.25	
NPI64T471KTRF	470 ± 10%	2.98	0.23	
NPI64T561KTRF	560 ± 10%	3.3	0.21	
NPI64T681KTRF	680 ± 10%	5.1	0.20	
NPI64T821KTRF	820 ± 10%	5.4	0.18	
NPI64T102KTRF	1000 ± 10%	6.0	0.16	

Maximum +40°C temperature rise at Irms. Maximum -10% inductance change at Isat.



Part Number	STANDARD VALUES - 65 CASE SIZE (6.0 x 6.0 x 4.9mm)			
	Inductance Value (μH)	DC Resistance (Ω)	DC Current Isat/Irms (Amps)	Test Frequency
NPI65T1R2MTRF	1.2 ± 20%	0.028	3.5	100KHz
NPI65T1R5MTRF	1.5 ± 20%	0.03	3	
NPI65T2R2MTRF	2.2 ± 20%	0.035	2.7	
NPI65T3R3MTRF	3.3 ± 20%	0.042	2.5	
NPI65T4R7MTRF	4.7 ± 20%	0.05	2.2	
NPI65T6R8MTRF	6.8 ± 20%	0.06	2	
NPI65T100MTRF	10 ± 20%	0.07	1.8	
NPI65T120MTRF	12 ± 20%	0.08	1.6	
NPI65T150MTRF	15 ± 20%	0.09	1.5	
NPI65T180MTRF	18 ± 20%	0.095	1.3	
NPI65T220MTRF	22 ± 20%	0.11	1.2	
NPI65T270MTRF	27 ± 20%	0.13	1.1	
NPI65T330KTRF	33 ± 10%	0.18	1	
NPI65T390KTRF	39 ± 10%	0.21	0.9	
NPI65T470KTRF	47 ± 10%	0.22	0.8	
NPI65T560KTRF	56 ± 10%	0.25	0.75	
NPI65T680KTRF	68 ± 10%	0.3	0.7	
NPI65T820KTRF	82 ± 10%	0.39	0.6	
NPI65T101KTRF	100 ± 10%	0.43	0.55	
NPI65T121KTRF	120 ± 10%	0.5	0.5	
NPI65T151KTRF	150 ± 10%	0.62	0.45	
NPI65T181KTRF	180 ± 10%	0.69	0.4	
NPI65T221KTRF	220 ± 10%	0.89	0.38	
NPI65T271KTRF	270 ± 10%	1	0.35	
NPI65T331KTRF	330 ± 10%	1.4	0.32	
NPI65T391KTRF	390 ± 10%	1.5	0.3	
NPI65T471KTRF	470 ± 10%	2	0.28	
NPI65T561KTRF	560 ± 10%	2.3	0.25	
NPI65T681KTRF	680 ± 10%	3.2	0.2	
NPI65T821KTRF	820 ± 10%	3.5	0.18	
NPI65T102KTRF	1000 ± 10%	4.1	0.16	

Maximum +40°C temperature rise at Irms. Maximum -10% inductance change at Isat.



Part Number	STANDARD VALUES - 73 CASE SIZE (7.0 x 7.0 x 3.3mm)			
	Inductance Value (μH)	DC Resistance (Ω)	DC Current Isat/Irms (Amps)	Test Frequency
NPI73T1R0MTRF	1.0 ± 20%	0.02	3.20	100KHz
NPI73T1R5MTRF	1.5 ± 20%	0.025	2.80	
NPI73T2R2MTRF	2.2 ± 20%	0.035	2.50	
NPI73T3R3MTRF	3.3 ± 20%	0.04	2.20	
NPI73T4R7MTRF	4.7 ± 20%	0.045	2.00	
NPI73T6R8MTRF	6.8 ± 20%	0.06	1.60	
NPI73T100MTRF	10 ± 20%	0.08	1.40	
NPI73T120MTRF	12 ± 20%	0.085	1.30	
NPI73T150LTRF	15 ± 15%	0.11	1.10	
NPI73T180LTRF	18 ± 15%	0.13	1.05	
NPI73T220LTRF	22 ± 15%	0.15	1.00	
NPI73T270LTRF	27 ± 15%	0.19	0.95	
NPI73T330LTRF	33 ± 15%	0.21	0.85	
NPI73T390LTRF	39 ± 15%	0.27	0.75	
NPI73T470LTRF	47 ± 15%	0.31	0.70	
NPI73T560KTRF	56 ± 10%	0.39	0.65	
NPI73T680KTRF	68 ± 10%	0.43	0.60	
NPI73T820KTRF	82 ± 10%	0.49	0.50	
NPI73T101KTRF	100 ± 10%	0.65	0.45	
NPI73T121KTRF	120 ± 10%	0.7	0.40	
NPI73T151KTRF	150 ± 10%	0.85	0.35	
NPI73T181KTRF	180 ± 10%	1.1	0.33	
NPI73T221KTRF	220 ± 10%	1.25	0.30	
NPI73T271KTRF	270 ± 10%	1.45	0.28	
NPI73T331KTRF	330 ± 10%	2	0.25	
NPI73T391KTRF	390 ± 10%	2.25	0.23	
NPI73T471KTRF	470 ± 10%	2.6	0.22	
NPI73T561KTRF	560 ± 10%	3.7	0.20	
NPI73T681KTRF	680 ± 10%	4.3	0.18	
NPI73T821KTRF	820 ± 10%	4.9	0.16	
NPI73T102KTRF	1000 ± 10%	5.6	0.15	

Maximum +40°C temperature rise at Irms. Maximum -10% inductance change at Isat.



Part Number	STANDARD VALUES - 75 CASE SIZE (7.0 x 7.0 x 4.9mm)			Test Frequency
	Inductance Value (µH)	DC Resistance (Ω)	DC Current Isat/Irms (Amps)	
NPI75T1R0MTRF	1.0 ± 20%	0.023	3.50	100KHz
NPI75T1R5MTRF	1.5 ± 20%	0.028	3.30	
NPI75T2R2MTRF	2.2 ± 20%	0.033	3.20	
NPI75T3R3MTRF	3.3 ± 20%	0.040	2.780	
NPI75T4R7MTRF	4.7 ± 20%	0.050	2.50	
NPI75T6R8MTRF	6.8 ± 20%	0.060	2.20	
NPI75T100MTRF	10 ± 20%	0.075	2.00	
NPI75T120MTRF	12 ± 20%	0.085	1.90	
NPI75T150LTRF	15 ± 15%	0.090	1.50	
NPI75T180LTRF	18 ± 15%	0.100	1.40	
NPI75T220LTRF	22 ± 15%	0.120	1.30	
NPI75T270LTRF	27 ± 15%	0.150	1.20	
NPI75T330LTRF	33 ± 15%	0.180	1.10	
NPI75T390LTRF	39 ± 15%	0.190	1.00	
NPI75T470LTRF	47 ± 15%	0.220	0.90	
NPI75T560KTRF	56 ± 10%	0.250	0.85	
NPI75T680KTRF	68 ± 10%	0.270	0.80	
NPI75T820KTRF	82 ± 10%	0.380	0.70	
NPI75T101KTRF	100 ± 10%	0.420	0.65	
NPI75T121KTRF	120 ± 10%	0.520	0.60	
NPI75T151KTRF	150 ± 10%	0.580	0.50	
NPI75T181KTRF	180 ± 10%	0.650	0.45	
NPI75T221KTRF	220 ± 10%	0.880	0.40	
NPI75T271KTRF	270 ± 10%	0.990	0.35	
NPI75T331KTRF	330 ± 10%	1.100	0.32	
NPI75T391KTRF	390 ± 10%	1.400	0.30	
NPI75T471KTRF	470 ± 10%	1.900	0.28	
NPI75T561KTRF	560 ± 10%	2.200	0.25	
NPI75T681KTRF	680 ± 10%	2.500	0.22	
NPI75T821KTRF	820 ± 10%	2.900	0.20	
NPI75T102KTRF	1000 ± 10%	4.000	0.18	

Maximum +40°C temperature rise at Irms. Maximum -10% inductance change at Isat.



Part Number	STANDARD VALUES - 103 CASE SIZE (10.0 x 10.0 x 3.3mm)			
	Inductance Value (µH)	DC Resistance (Ω)	DC Current Isat/Irms (Amps)	Test Frequency
NPI103T1R8MTRF	1.8 ± 20%	0.027	4.00	100KHz
NPI103T2R2MTRF	2.2 ± 20%	0.030	3.65	
NPI103T3R3MTRF	3.3 ± 20%	0.035	3.15	
NPI103T4R7MTRF	4.7 ± 20%	0.040	3.00	
NPI103T6R8MTRF	6.8 ± 20%	0.050	2.35	
NPI103T100MTRF	10 ± 20%	0.060	2.20	
NPI103T120MTRF	12 ± 20%	0.080	2.00	
NPI103T150MTRF	15 ± 20%	0.100	1.75	
NPI103T180LTRF	18 ± 15%	0.110	1.70	
NPI103T220LTRF	22 ± 15%	0.140	1.60	
NPI103T270LTRF	27 ± 15%	0.160	1.40	
NPI103T330LTRF	33 ± 15%	0.210	1.20	
NPI103T390LTRF	39 ± 15%	0.235	1.10	
NPI103T470LTRF	47 ± 15%	0.280	1.00	
NPI103T560LTRF	56 ± 15%	0.320	0.90	
NPI103T680LTRF	68 ± 15%	0.370	0.85	
NPI103T820LTRF	82 ± 15%	0.430	0.74	
NPI103T101KTRF	100 ± 10%	0.560	0.70	
NPI103T121KTRF	120 ± 10%	0.640	0.60	
NPI103T151KTRF	150 ± 10%	0.730	0.55	
NPI103T181KTRF	180 ± 10%	0.960	0.50	
NPI103T221KTRF	220 ± 10%	1.100	0.48	
NPI103T271KTRF	270 ± 10%	1.240	0.45	
NPI103T331KTRF	330 ± 10%	1.640	0.38	
NPI103T391KTRF	390 ± 10%	1.790	0.35	
NPI103T471KTRF	470 ± 10%	2.050	0.30	
NPI103T561KTRF	560 ± 10%	2.890	0.29	
NPI103T681KTRF	680 ± 10%	3.240	0.27	
NPI103T821KTRF	820 ± 10%	3.700	0.25	
NPI103T102KTRF	1000 ± 10%	7.000	0.24	

Maximum +40°C temperature rise at Irms. Maximum -10% inductance change at Isat.

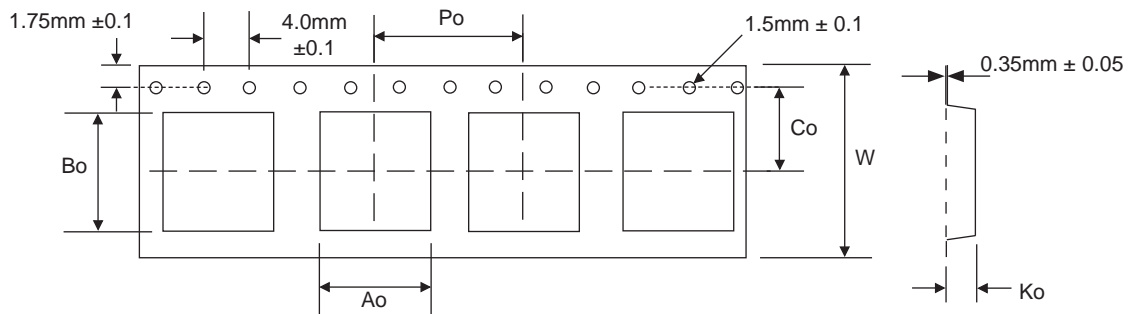


Part Number	STANDARD VALUES - 104 CASE SIZE (10.0 x 10.0 x 4.9mm)			
	Inductance Value (µH)	DC Resistance (Ω)	DC Current Isat/Irms (Amps)	Test Frequency
NPI104T1R8MTRF	1.8 ± 20%	0.023	5.50	100KHz
NPI104T2R2MTRF	2.2 ± 20%	0.025	5.00	
NPI104T3R3MTRF	3.3 ± 20%	0.030	4.50	
NPI104T4R7MTRF	4.7 ± 20%	0.035	4.00	
NPI104T6R8MTRF	6.8 ± 20%	0.040	3.80	
NPI104T100MTRF	10 ± 20%	0.050	3.30	
NPI104T120MTRF	12 ± 20%	0.055	3.20	
NPI104T150MTRF	15 ± 20%	0.065	3.00	
NPI104T180LTRF	18 ± 15%	0.070	2.70	
NPI104T220LTRF	22 ± 15%	0.080	2.60	
NPI104T270LTRF	27 ± 15%	0.090	2.40	
NPI104T330LTRF	33 ± 15%	0.110	2.00	
NPI104T390LTRF	39 ± 15%	0.120	1.90	
NPI104T470LTRF	47 ± 15%	0.130	1.80	
NPI104T560LTRF	56 ± 15%	0.180	1.60	
NPI104T680LTRF	68 ± 15%	0.210	1.40	
NPI104T820LTRF	82 ± 15%	0.240	1.30	
NPI104T101KTRF	100 ± 10%	0.290	1.20	
NPI104T121KTRF	120 ± 10%	0.340	1.10	
NPI104T151KTRF	150 ± 10%	0.470	1.00	
NPI104T181KTRF	180 ± 10%	0.530	0.90	
NPI104T221KTRF	220 ± 10%	0.730	0.80	
NPI104T271KTRF	270 ± 10%	0.830	0.70	
NPI104T331KTRF	330 ± 10%	0.990	0.65	
NPI104T391KTRF	390 ± 10%	1.100	0.60	
NPI104T471KTRF	470 ± 10%	1.250	0.55	
NPI104T561KTRF	560 ± 10%	1.600	0.50	
NPI104T681KTRF	680 ± 10%	1.800	0.45	
NPI104T821KTRF	820 ± 10%	2.060	0.40	
NPI104T102KTRF	1000 ± 10%	2.800	0.38	

Maximum +40°C temperature rise at Irms. Maximum -10% inductance change at Isat.



Case Size	TAPING DIMENSIONS (mm)						Qty/Reel
	Ao	Bo	Ko	Co	W	Po	
NPI63T	6.4	6.4	3.3	7.5	16.0	12.0	1,000
NPI64T	6.4	6.4	4.3	7.5	16.0	12.0	
NPI65T	6.4	6.4	5.0	7.5	16.0	12.0	
NPI73T	7.6	7.6	3.4	7.5	16.0	12.0	
NPI75T	7.6	7.6	5.0	7.5	16.0	12.0	
NPI103T	10.4	10.4	3.5	11.5	24.0	16.0	600
NPI104T	10.4	10.4	5.0	11.5	24.0	16.0	



Tape Width	REEL DIMENSIONS (mm)			
	A(mm)	B(mm)	C(mm)	D(mm)
16mm	16.0 ±0.5	75 ±2.0	13 ±0.5	330
24mm	24.5 ±0.5			

