

### FEATURES

- SHIELDED POWER INDUCTOR
- SMALL SIZE WITH CURRENT RATINGS TO 13.5 AMPS
- SURFACE MOUNTABLE CONSTRUCTION
- HIGH INDUCTANCE (UP TO 1,000 $\mu$ H)
- TAPED AND REELED FOR AUTOMATIC INSERTION
- FOR USE IN DC/DC CONVERTERS

**RoHS Compliant**  
includes all homogeneous materials

\*See Part Number System for Details

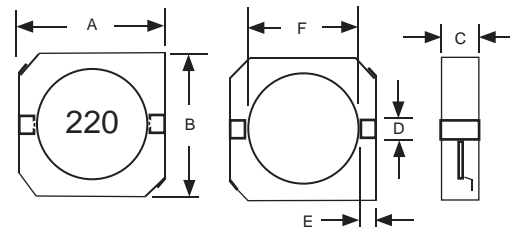


### CHARACTERISTICS

Case Size	NPIS103F	NPIS104F	NPIS105F
Inductance Range	0.8 ~ 150 $\mu$ H	1.5 ~ 330 $\mu$ H	0.8 ~ 1,000 $\mu$ H
Ambient Operating Temperature Range	-25°C ~ +85°C		
Maximum Component Temperature (Ambient + Self-Heating)	+125°C		
Temperature Rise at IDC	+40°C max.		
Inductance Change at IDC	-25% typical		
Inductance Tolerance	$\pm$ 20% (M)		
Resistance to Solder Heat	260°C for 10 seconds		

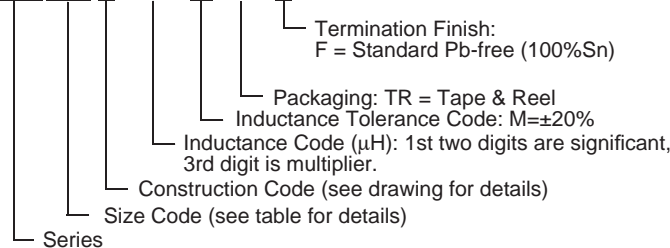
### DIMENSIONS (mm)

Series	A	B	C	D	E	F
NPIS103F	10.6 max	10.5 max	3.0 max	3.0 ref	1.2 $\pm$ 0.15	7.7 $\pm$ 0.3
NPIS104F			4.0 max			
NPIS105F			5.0 max			

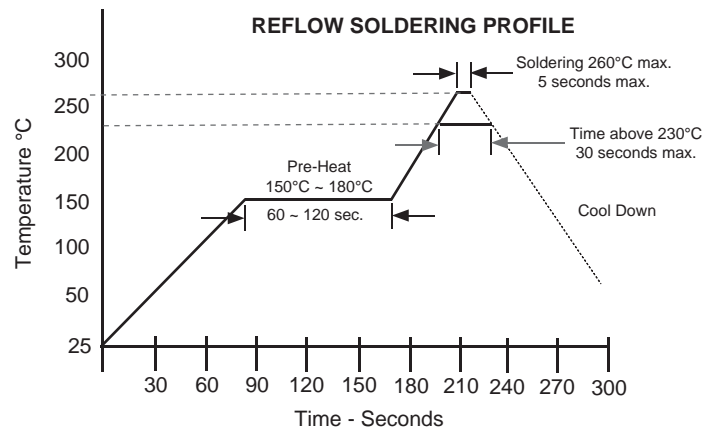
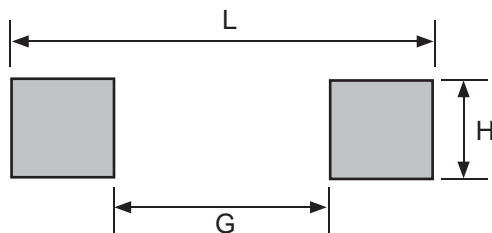


### PART NUMBER SYSTEM

NPIS104 F 151 M TR F



L	G	H
10.7	7.3	3.6



Part Number	STANDARD VALUES - CASE SIZE 103 (10.6 x 10.5 x 3.0mm)			
	Inductance Value (μH)	DC Resistance (mΩ)	DC Current I <sub>rms</sub> /I <sub>sat</sub> (Amps)	Test Frequency
NPIS103F0R8MTRF	0.8 ± 20%	5.7	8.3	100KHz
NPIS103F1R5MTRF	1.5 ± 20%	11	5.8	
NPIS103F2R2MTRF	2.2 ± 20%	16.9	5.1	
NPIS103F3R3MTRF	3.3 ± 20%	21	4.7	
NPIS103F4R7MTRF	4.7 ± 20%	30	4	
NPIS103F6R8MTRF	6.8 ± 20%	35	3.6	
NPIS103F8R2MTRF	8.2 ± 20%	50	3	
NPIS103F100MTRF	10 ± 20%	59	2.8	1KHz
NPIS103F150MTRF	15 ± 20%	91	2.05	
NPIS103F220MTRF	22 ± 20%	143	1.6	
NPIS103F330MTRF	33 ± 20%	202	1.35	
NPIS103F470MTRF	47 ± 20%	299	1.2	
NPIS103F560MTRF	56 ± 20%	325	1.15	
NPIS103F680MTRF	68 ± 20%	429	0.95	
NPIS103F101MTRF	100 ± 20%	494	0.8	
NPIS103F121MTRF	120 ± 20%	754	0.65	
NPIS103F151MTRF	150 ± 20%	871	0.51	

I<sub>rms</sub>/I<sub>sat</sub> specification is based on +40°C temperature rise or -25% inductance change at inductance whichever is less.

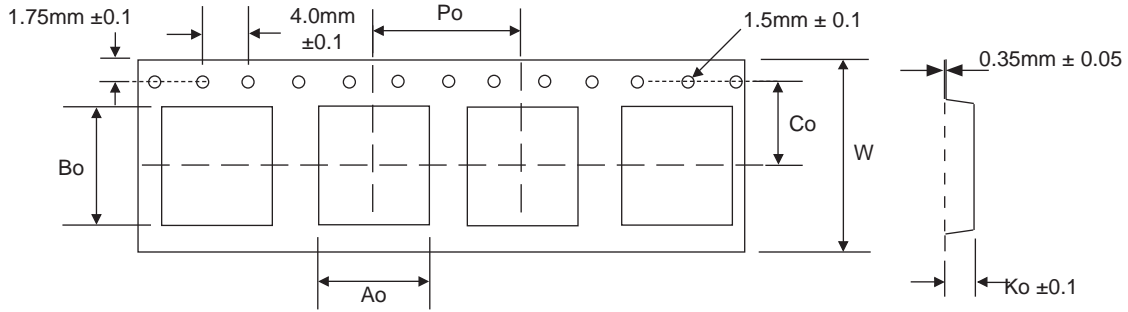
Part Number	STANDARD VALUES - CASE SIZE 104 (10.6 x 10.5 x 4.0mm)			
	Inductance Value (μH)	DC Resistance (mΩ)	DC Current I <sub>rms</sub> /I <sub>sat</sub> (Amps)	Test Frequency
NPIS104F1R5MTRF	1.5 ± 20%	8.1	6.50	100KHz
NPIS104F2R5MTRF	2.5 ± 20%	10.5	6.10	
NPIS104F3R8MTRF	3.8 ± 20%	13.0	5.50	
NPIS104F4R7MTRF	4.7 ± 20%	20.0	5.40	
NPIS104F5R2MTRF	5.2 ± 20%	22.0	5.40	
NPIS104F6R8MTRF	6.8 ± 20%	27.0	4.50	
NPIS104F7R0MTRF	7.0 ± 20%	27.0	4.50	
NPIS104F100MTRF	10 ± 20%	40.0	3.80	1KHz
NPIS104F150MTRF	15 ± 20%	80.0	3.10	
NPIS104F220MTRF	22 ± 20%	73.0	2.50	
NPIS104F330MTRF	33 ± 20%	93.0	2.20	
NPIS104F470MTRF	47 ± 20%	128.0	1.90	
NPIS104F680MTRF	68 ± 20%	213.0	1.42	
NPIS104F101MTRF	100 ± 20%	304.0	1.25	
NPIS104F151MTRF	150 ± 20%	506.0	0.85	
NPIS104F221MTRF	220 ± 20%	756.0	0.70	
NPIS104F331MTRF	330 ± 20%	1090.0	0.52	

I<sub>rms</sub>/I<sub>sat</sub> specification is based on +40°C temperature rise or -25% inductance change at inductance whichever is less.

Part Number	STANDARD VALUES - CASE SIZE 105 (10.6 x 10.5 x 5.2mm)			
	Inductance Value (μH)	DC Resistance (mΩ)	DC Current I <sub>rms</sub> /I <sub>sat</sub> (Amps)	Test Frequency
NPIS105FR80MTRF	0.8 ± 20%	4.3	13.50	100KHz
NPIS105F1R5MTRF	1.5 ± 20%	5.8	10.5	
NPIS105F2R2MTRF	2.2 ± 20%	7.2	9.25	
NPIS105F3R3MTRF	3.3 ± 20%	10.4	7.80	
NPIS105F4R7MTRF	4.7 ± 20%	12.3	6.40	
NPIS105F6R8MTRF	6.8 ± 20%	18.0	5.40	
NPIS105F8R2MTRF	8.2 ± 20%	20.0	4.85	
NPIS105F100MTRF	10 ± 20%	26.0	4.45	
NPIS105F120MTRF	12 ± 20%	33.0	4.00	
NPIS105F150MTRF	15 ± 20%	41.0	3.60	
NPIS105F180MTRF	18 ± 20%	46.0	3.20	
NPIS105F220MTRF	22 ± 20%	61.0	2.95	
NPIS105F270MTRF	27 ± 20%	69.0	2.70	
NPIS105F330MTRF	33 ± 20%	84.0	2.40	
NPIS105F390MTRF	39 ± 20%	106.0	2.30	
NPIS105F470MTRF	47 ± 20%	130.0	2.00	
NPIS105F560MTRF	56 ± 20%	149.0	1.90	
NPIS105F680MTRF	68 ± 20%	201.0	1.65	
NPIS105F820MTRF	82 ± 20%	227.0	1.50	
NPIS105F101MTRF	100 ± 20%	253.0	1.35	
NPIS105F121MTRF	120 ± 20%	303.0	1.28	
NPIS105F151MTRF	150 ± 20%	370.0	1.12	
NPIS105F181MTRF	180 ± 20%	419.0	1.04	
NPIS105F221MTRF	220 ± 20%	500.0	0.94	
NPIS105F331MTRF	330 ± 20%	812.0	0.75	
NPIS105F391MTRF	390 ± 20%	953.0	0.70	
NPIS105F471MTRF	470 ± 20%	1289.0	0.60	
NPIS105F561MTRF	560 ± 20%	1430.0	0.54	
NPIS105F681MTRF	680 ± 20%	1599.0	0.52	
NPIS105F821MTRF	820 ± 20%	1768.0	0.50	
NPIS105F102MTRF	1,000 ± 20%	1989.0	0.48	

I<sub>rms</sub>/I<sub>sat</sub> specification is based on +40°C temperature rise or -25% inductance change at inductance whichever is less.

Case Size	TAPING DIMENSIONS (mm)						
	Ao	Bo	Ko	Co	W	Po	Qty/Reel
NPIS103F	10.65	10.65	3.2	11.5	24.0	16.0	1,000
NPIS104F			4.2				1,000
NPIS105F			5.2				750



Tape Width	REEL DIMENSIONS (mm)			
	A(mm)	B(mm)	C(mm)	D(mm)
16mm	26.0 +0	100 -0	13 ±0.5	330

