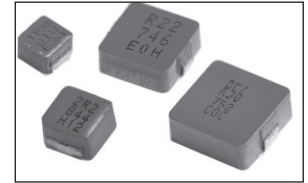


FEATURES

- SHIELDED POWER INDUCTOR
- MOLDED METAL COMPOSITE CONSTRUCTION
- HIGH SATURATION CURRENT (~ 125A)
- HIGH EFFICIENCY (2X IMPROVEMENT OVER FERRITE CORE INDUCTORS)
- LOW PROFILES

**RoHS
Compliant**
includes all homogeneous materials

*See Part Number System for Details

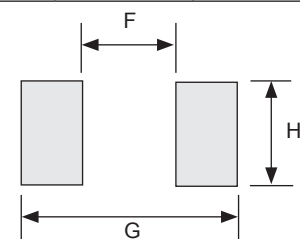
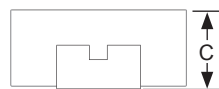
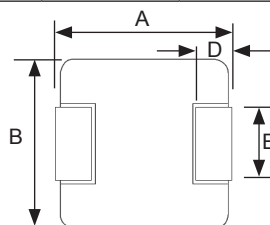


CHARACTERISTICS

Case Code	NPIM31P	NPIM41P	NPIM42P	NPIM50P	NPIM51P
Inductance Range (μH)	0.47 ~ 1.0	0.1 ~ 10	0.1 ~ 22	0.1 ~ 10	0.33 ~ 10
Case Code	NPIM58P	NPIM52P	NPIM53P	NPIM70P	NPIM71P
Inductance Range (μH)	0.33 ~ 10	0.33 ~ 10	0.33 ~ 10	0.22 ~ 10	0.22 ~ 10
Case Code	NPIM78P	NPIM72P	NPIM73P	NPIM74P	NPIM84P
Inductance Range (μH)	0.33 ~ 10	0.1 ~ 10	0.33 ~ 10	0.22 ~ 33	0.19 ~ 47
Case Code	NPIM104P	NPIM147P	NPIM187P		
Inductance Range (μH)	0.22 ~ 33	0.33 ~ 10	0.45 ~ 100		
Operating Temperature Range (Ambient + Self-Heating)	-40°C ~ +125°C (-55°C ~ +125°C for 84 and 147 case sizes)				
Temperature Rise at Irms	+40°C				
Inductance Change at Isat	-20%				
Inductance Tolerance	±20% (M), ±30% (Y)				
Resistance to Solder Heat	260°C ±5°C for 10 seconds				

DIMENSIONS (mm)

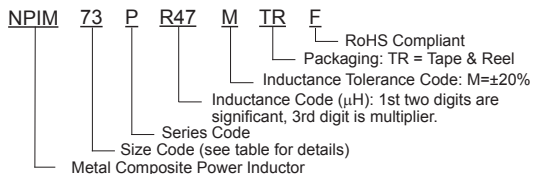
Series	A	B	C	D	E	F	G	H
NPIM31P	3.5 ± 0.2	3.2 ± 0.2	1.0 ± 0.2	0.7 ± 0.2	1.2 ± 0.2	1.9	4.1	1.45
NPIM41P	4.45 ± 0.25	4.06 ± 0.25	1.0 ± 0.2	0.76 ± 0.30	2.0 ± 0.20	2.2	5.2	2.3
NPIM42P	4.45 ± 0.25	4.06 ± 0.25	1.8 ± 0.2	0.76 ± 0.30	2.0 ± 0.20	2.2	5.2	2.4
NPIM50P	5.7 ± 0.3	5.2 ± 0.2	1.0 ± 0.2	1.1 ± 0.3	2.5 ± 0.3	2.2	6.2	2.8
NPIM51P	5.7 ± 0.3	5.2 ± 0.2	1.3 ± 0.2	1.1 ± 0.3	2.5 ± 0.3	2.2	6.2	2.8
NPIM58P	5.7 ± 0.3	5.2 ± 0.2	1.6 ± 0.2	1.1 ± 0.3	2.5 ± 0.3	2.2	6.2	2.8
NPIM52P	5.7 ± 0.3	5.2 ± 0.2	1.8 ± 0.2	1.1 ± 0.3	2.5 ± 0.3	2.2	6.2	2.8
NPIM53P	5.7 ± 0.3	5.2 ± 0.2	2.8 ± 0.2	1.1 ± 0.3	1.5 ± 0.2	2.5	6.2	1.8
NPIM70P	7.0 ± 0.3	6.6 ± 0.3	1.0 ± 0.2	1.8 ± 0.3	2.5 ± 0.3	2.5	7.7	3.0
NPIM71P	7.0 ± 0.3	6.6 ± 0.3	1.3 ± 0.2	1.8 ± 0.3	3.0 ± 0.3	2.5	7.7	3.5
NPIM78P	7.0 ± 0.3	6.6 ± 0.3	1.6 ± 0.2	1.8 ± 0.3	3.0 ± 0.3	2.5	7.7	3.5
NPIM72P	7.0 ± 0.3	6.6 ± 0.3	1.8 ± 0.2	1.8 ± 0.3	3.0 ± 0.3	2.5	7.7	3.5
NPIM73P	7.0 ± 0.3	6.6 ± 0.3	2.2 ± 0.2	1.8 ± 0.3	3.0 ± 0.3	2.5	7.7	3.5
NPIM74P	7.3 ± 0.3	6.6 ± 0.3	2.8 ± 0.2	1.8 ± 0.3	3.0 ± 0.3	2.5	8.4	3.5
NPIM84P	8.6 ± 0.3	8.0 ± 0.3	3.8 ± 0.2	1.8 ± 0.3	R19 ~ R82 3.0 ± 0.5 1R0 ~ 330 3.2 ± 0.5	4.6	10.6	3.8
NPIM104P	11.0 ± 0.5	10.0 ± 0.3	3.8 ± 0.2	2.3 ± 0.3	3.0 ± 0.3	5.4	13.6	3.5
NPIM147P	13.4 ± 0.5	12.5 ± 0.3	6.8 ± 0.2	2.3 ± 0.3	3.0 ± 0.5	8.0	14.5	5.0
NPIM187P	17.6 ± 0.4	16.9 ± 0.3	6.7 ± 0.3	2.1 ± 0.3	11.9 ± 0.3	12.2	18.5	12.5



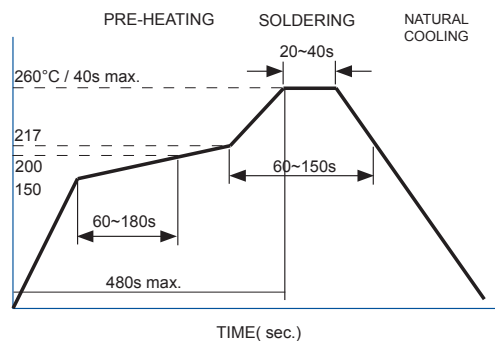
LAND PATTERN



PART NUMBER SYSTEM



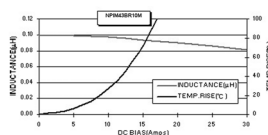
REFLOW SOLDERING PROFILE



NPIM31P Size

Part Number	STANDARD VALUES - CASE SIZE Size 31P (3.5 x 3.2 x 1)					
	Inductance Value (μH)	Typ. DCR ($\text{m}\Omega$)	Max. DCR ($\text{m}\Omega$)	DC Current Irms (Amps)	DC Current Isat (Amps)	Test Frequency
NPIM31PR47MTRF	$0.47 \pm 20\%$	25	30	5.0	7.2	100KHz
NPIM31P1R0MTRF	$1.00 \pm 20\%$	50	60	3.3	5.5	

Maximum +40°C temperature rise at Irms. Typical -20% inductance change at Isat



Contact NIC for
NPIM_P Performance Curves

NPIM41P Size

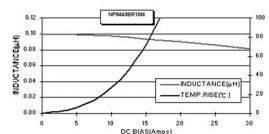
Part Number	STANDARD VALUES - CASE Size 41P (4.45 x 4.06 x 1.0)					Test Frequency
	Inductance Value (μ H)	Typ. DCR ($m\Omega$)	Max. DCR ($m\Omega$)	DC Current Irms (Amps)	DC Current Isat (Amps)	
NPIM41PR10YTRF	0.10 $\pm$ 30%	4.3	5.5	11.5	25	100KHz
NPIM41PR22MTRF	0.22 $\pm$ 20%	6.6	8.0	8.5	20	
NPIM41PR47MTRF	0.47 $\pm$ 20%	18	20	6.0	6.5	
NPIM41P1R0MTRF	1.00 $\pm$ 20%	41	47	4.0	6.0	
NPIM41P1R5MTRF	1.50 $\pm$ 20%	55	63.3	3.0	4.0	
NPIM41P2R2MTRF	2.20 $\pm$ 20%	69.2	80	2.8	3.5	
NPIM41P3R3MTRF	3.30 $\pm$ 20%	84	97	2.3	3.0	
NPIM41P4R7MTRF	4.70 $\pm$ 20%	128	145	2.0	2.5	
NPIM41P5R6MTRF	5.60 $\pm$ 20%	180	208	1.7	2.3	
NPIM41P6R8MTRF	6.80 $\pm$ 20%	300	360	1.5	1.7	
NPIM41P8R2MTRF	8.20 $\pm$ 20%	313	376	1.4	1.6	
NPIM41P100MTRF	10.0 $\pm$ 20%	410	463	1.3	1.4	

Maximum +40°C temperature rise at Irms. Typical -20% inductance change at Isat

NPIM42P Size

Part Number	STANDARD VALUES - CASE Size 42P (4.45 x 4.06 x 1.8)					Test Frequency
	Inductance Value (μ H)	Typ. DCR ($m\Omega$)	Max. DCR ($m\Omega$)	DC Current Irms (Amps)	DC Current Isat (Amps)	
NPIM42PR10YTRF	0.10 $\pm$ 30%	3.2	4.0	12	35	100KHz
NPIM42PR22YTRF	0.22 $\pm$ 30%	6.6	7.3	13	24	
NPIM42PR33MTRF	0.33 $\pm$ 20%	7.8	8.6	10	18	
NPIM42PR47MTRF	0.47 $\pm$ 20%	11.2	14	8.0	12	
NPIM42PR56MTRF	0.56 $\pm$ 20%	13.5	16	7.3	10	
NPIM42PR68MTRF	0.68 $\pm$ 20%	16	19	7.0	10	
NPIM42P1R0MTRF	1.00 $\pm$ 20%	22	27	5.0	8.5	
NPIM42P1R2MTRF	1.20 $\pm$ 20%	25	30	4.8	7.8	
NPIM42P1R5MTRF	1.50 $\pm$ 20%	34.8	42	4.5	7.0	
NPIM42P2R2MTRF	2.20 $\pm$ 20%	51	61	4.0	6.0	
NPIM42P3R3MTRF	3.30 $\pm$ 20%	69	76	3.5	4.0	
NPIM42P4R7MTRF	4.70 $\pm$ 20%	95	105	2.6	3.5	
NPIM42P5R6MTRF	5.60 $\pm$ 20%	112	125	2.2	3.0	
NPIM42P6R8MTRF	6.80 $\pm$ 20%	150	172	2.1	2.8	
NPIM42P8R2MTRF	8.20 $\pm$ 20%	158	180	2.0	2.5	
NPIM42P100MTRF	10.0 $\pm$ 20%	215	243	1.8	2.3	
NPIM42P150MTRF	15.0 $\pm$ 20%	325	374	1.5	1.9	
NPIM42P220MTRF	22.0 $\pm$ 20%	470	500	1.2	1.4	

Maximum +40°C temperature rise at Irms. Typical -20% inductance change at Isat



Contact NIC for
NPIM_P Performance Curves

NPIM50P Size

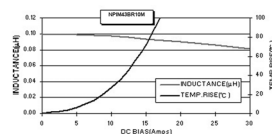
Part Number	STANDARD VALUES - CASE Size 50P (5.7 x 5.2 x 1.0)					
	Inductance Value (μ H)	Typ. DCR ($m\Omega$)	Max. DCR ($m\Omega$)	DC Current Irms (Amps)	DC Current Isat (Amps)	Test Frequency
NPIM50PR10YTRF	0.10 $\pm$ 30%	4.3	5.2	14.0	14.5	100KHz
NPIM50PR22YTRF	0.22 $\pm$ 30%	5.5	6.7	10.7	14.0	
NPIM50PR33MTRF	0.33 $\pm$ 20%	7.8	9.4	8.5	13.5	
NPIM50PR36MTRF	0.36 $\pm$ 20%	10	11.5	8.0	13.0	
NPIM50PR47MTRF	0.47 $\pm$ 20%	13.6	15.8	7.0	11.0	
NPIM50PR68MTRF	0.68 $\pm$ 20%	21.5	24.5	6.0	9.0	
NPIM50P1R0MTRF	1.00 $\pm$ 20%	26	30	5.0	6.0	
NPIM50P1R2MTRF	1.20 $\pm$ 20%	33	40	4.5	5.5	
NPIM50P1R5MTRF	1.50 $\pm$ 20%	38	44	4.0	5.0	
NPIM50P2R2MTRF	2.20 $\pm$ 20%	65	75	3.5	4.0	
NPIM50P3R3MTRF	3.30 $\pm$ 20%	75	86	3.0	3.8	
NPIM50P4R7MTRF	4.70 $\pm$ 20%	100	115	2.5	3.2	
NPIM50P5R6MTRF	5.60 $\pm$ 20%	175	201	2.4	3.2	
NPIM50P6R8MTRF	6.80 $\pm$ 20%	193	222	2.0	3.0	
NPIM50P8R2MTRF	8.20 $\pm$ 20%	327	378	1.7	2.8	
NPIM50P100MTRF	10.0 $\pm$ 20%	335	385	1.5	1.8	

Maximum +40°C temperature rise at Irms. Typical -20% inductance change at Isat

NPIM51P Size

Part Number	STANDARD VALUES - CASE Size 51P (5.7 x 5.2 x 1.3)					
	Inductance Value (μ H)	Typ. DCR ($m\Omega$)	Max. DCR ($m\Omega$)	DC Current Irms (Amps)	DC Current Isat (Amps)	Test Frequency
NPIM51PR33MTRF	0.33 $\pm$ 20%	8.5	9.8	9.0	16	100KHz
NPIM51PR47MTRF	0.47 $\pm$ 20%	12	13.8	8.0	15	
NPIM51PR68MTRF	0.68 $\pm$ 20%	14	16.2	7.0	13	
NPIM51P1R0MTRF	1.00 $\pm$ 20%	22	25.3	6.0	9.0	
NPIM51P1R5MTRF	1.50 $\pm$ 20%	39	45	4.5	7.0	
NPIM51P2R2MTRF	2.20 $\pm$ 20%	45	52	4.0	6.0	
NPIM51P3R3MTRF	3.30 $\pm$ 20%	78	90	3.2	4.5	
NPIM51P4R7MTRF	4.70 $\pm$ 20%	103	118	2.7	4.0	
NPIM51P5R6MTRF	5.60 $\pm$ 20%	126	152	2.4	3.2	
NPIM51P6R8MTRF	6.80 $\pm$ 20%	142	171	2.3	3.0	
NPIM51P8R2MTRF	8.20 $\pm$ 20%	175	210	2.1	2.6	
NPIM51P100MTRF	10.0 $\pm$ 20%	210	235	2.0	2.3	

Maximum +40°C temperature rise at Irms. Typical -20% inductance change at Isat



Contact NIC for
NPIM_P Performance Curves



NPIM58P Size

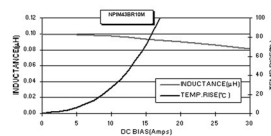
Part Number	STANDARD VALUES - CASE Size 58P (5.7 x 5.2 x 1.6)					
	Inductance Value (μ H)	Typ. DCR ($m\Omega$)	Max. DCR ($m\Omega$)	DC Current Irms (Amps)	DC Current Isat (Amps)	Test Frequency
NPIM58PR33MTRF	0.33 $\pm$ 20%	7.5	8.6	11	15	100KHz
NPIM58PR47MTRF	0.47 $\pm$ 20%	9.8	11.3	10	14	
NPIM58PR68MTRF	0.68 $\pm$ 20%	12.4	14.3	9.0	13	
NPIM58P1R0MTRF	1.0 $\pm$ 20%	18.2	21	6.8	10	
NPIM58P1R5MTRF	1.5 $\pm$ 20%	26	30	6.0	9.0	
NPIM58P2R2MTRF	2.2 $\pm$ 20%	42	48.3	4.5	7.5	
NPIM58P3R3MTRF	3.3 $\pm$ 20%	60	69	3.5	5.0	
NPIM58P4R7MTRF	4.7 $\pm$ 20%	85	98	3.0	4.5	
NPIM58P5R6MTRF	5.6 $\pm$ 20%	110	127	2.5	4.0	
NPIM58P6R8MTRF	6.8 $\pm$ 20%	118	137	2.4	3.5	
NPIM58P8R2MTRF	8.2 $\pm$ 20%	143	165	2.3	3.0	
NPIM58P100MTRF	10 $\pm$ 20%	165	190	2.3	2.8	

Maximum +40°C temperature rise at Irms. Typical -20% inductance change at Isat

NPIM52P Size

Part Number	STANDARD VALUES - CASE Size 52P (5.7 x 5.2 x 1.8)					
	Inductance Value (μ H)	Typ. DCR ($m\Omega$)	Max. DCR ($m\Omega$)	DC Current Irms (Amps)	DC Current Isat (Amps)	Test Frequency
NPIM52PR33MTRF	0.33 $\pm$ 20%	6.3	7.3	12	21.3	100KHz
NPIM52PR47MTRF	0.47 $\pm$ 20%	7.3	8.6	11.5	18	
NPIM52PR68MTRF	0.68 $\pm$ 20%	11	12.4	10	12.8	
NPIM52P1R0MTRF	1.00 $\pm$ 20%	17.5	20	7.0	13.7	
NPIM52P1R2MTRF	1.20 $\pm$ 20%	23	28	6.2	11	
NPIM52P1R5MTRF	1.50 $\pm$ 20%	26.5	30.5	5.5	9.8	
NPIM52P2R2MTRF	2.20 $\pm$ 20%	42	50	4.2	9.0	
NPIM52P3R3MTRF	3.30 $\pm$ 20%	66	76	3.3	7.3	
NPIM52P4R7MTRF	4.70 $\pm$ 20%	103	116	2.8	5.0	
NPIM52P5R6MTRF	5.60 $\pm$ 20%	112	122	2.5	4.0	
NPIM52P6R8MTRF	6.80 $\pm$ 20%	130	150	2.4	3.8	
NPIM52P8R2MTRF	8.2 $\pm$ 20%	148	171	2.3	3.5	
NPIM52P100MTRF	10 $\pm$ 20%	180	199	2.3	3.4	

Maximum +40°C temperature rise at Irms. Typical -20% inductance change at Isat



Contact NIC for
NPIM_P Performance Curves

NPIM53P Size

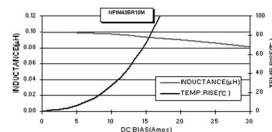
Part Number	STANDARD VALUES - CASE Size 53P (5.7 x 5.2 x 2.8)					
	Inductance Value (μ H)	Typ. DCR ($m\Omega$)	Max. DCR ($m\Omega$)	DC Current Irms (Amps)	DC Current Isat (Amps)	Test Frequency
NPIM53PR33MTRF	0.33 $\pm$ 20%	4.3	5.0	14	18	100KHz
NPIM53PR47MTRF	0.47 $\pm$ 20%	6.4	7.4	12	16	
NPIM53PR68MTRF	0.68 $\pm$ 20%	10	12	8.5	14	
NPIM53P1R0MTRF	1.00 $\pm$ 20%	13	14	7.0	11	
NPIM53P1R2MTRF	1.20 $\pm$ 20%	14	16	6.5	11	
NPIM53P1R5MTRF	1.50 $\pm$ 20%	16	25	6.0	10	
NPIM53P2R2MTRF	2.20 $\pm$ 20%	25	35	5.5	9.0	
NPIM53P3R3MTRF	3.30 $\pm$ 20%	32	38	5.0	8.0	
NPIM53P4R7MTRF	4.70 $\pm$ 20%	50	53	4.6	6.0	
NPIM53P5R6MTRF	5.60 $\pm$ 20%	55	63	4.25	4.5	
NPIM53P6R8MTRF	6.80 $\pm$ 20%	68	76.2	4.0	4.3	
NPIM53P100MTRF	10.0 $\pm$ 20%	110	128	2.75	3.5	

Maximum +40°C temperature rise at Irms. Typical -20% inductance change at Isat

NPIM70P Size

Part Number	STANDARD VALUES - CASE Size 70P (7 x 6.6 x 1.0)					
	Inductance Value (μ H)	Typ. DCR ($m\Omega$)	Max. DCR ($m\Omega$)	DC Current Irms (Amps)	DC Current Isat (Amps)	Test Frequency
NPIM70PR22YTRF	0.22 $\pm$ 30%	6.5	7.5	11	19	100KHz
NPIM70PR33MTRF	0.33 $\pm$ 20%	9.0	10	9.5	16	
NPIM70PR47MTRF	0.47 $\pm$ 20%	13	17	8.5	12	
NPIM70PR68MTRF	0.68 $\pm$ 20%	17	19	7.0	9.0	
NPIM70P1R0MTRF	1.00 $\pm$ 20%	27	30	6.0	7.0	
NPIM70P1R2MTRF	1.20 $\pm$ 20%	31	36	5.0	6.8	
NPIM70P1R5MTRF	1.50 $\pm$ 20%	35	40	4.5	6.5	
NPIM70P2R2MTRF	2.20 $\pm$ 20%	53	61	4.0	5.0	
NPIM70P3R3MTRF	3.30 $\pm$ 20%	90	103	3.2	4.0	
NPIM70P4R7MTRF	4.70 $\pm$ 20%	130	150	2.5	3.8	
NPIM70P6R8MTRF	6.80 $\pm$ 20%	172	198	2.1	3.0	
NPIM70P100MTRF	10.0 $\pm$ 20%	280	290	1.8	2.5	

Maximum +40°C temperature rise at Irms. Typical -20% inductance change at Isat



Contact NIC for
NPIM_P Performance Curves



NPIM71P Size

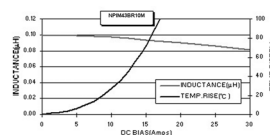
Part Number	STANDARD VALUES - CASE Size 71P (7 x 6.6 x 1.3)					
	Inductance Value (μ H)	Typ. DCR ($m\Omega$)	Max. DCR ($m\Omega$)	DC Current Irms (Amps)	DC Current Isat (Amps)	Test Frequency
NPIM71PR22YTRF	0.22 $\pm$ 30%	4.3	5.2	14	22	100KHz
NPIM71PR33MTRF	0.33 $\pm$ 20%	6.6	7.6	11	18	
NPIM71PR47MTRF	0.47 $\pm$ 20%	9.0	10.3	9.5	16	
NPIM71PR68MTRF	0.68 $\pm$ 20%	13.8	15.2	7.5	15	
NPIM71P1R0MTRF	1.00 $\pm$ 20%	23	25.8	6.5	12	
NPIM71P1R2MTRF	1.20 $\pm$ 20%	29	34	5.6	10.5	
NPIM71P1R5MTRF	1.50 $\pm$ 20%	37	42.5	5.0	9.5	
NPIM71P2R2MTRF	2.20 $\pm$ 20%	48	55	4.5	6.5	
NPIM71P3R3MTRF	3.30 $\pm$ 20%	62	74	4.2	6.0	
NPIM71P4R7MTRF	4.70 $\pm$ 20%	96	111	3.8	5.0	
NPIM71P5R6MTRF	5.60 $\pm$ 20%	115	138	3.0	4.5	
NPIM71P6R8MTRF	6.80 $\pm$ 20%	128	148	2.6	3.5	
NPIM71P8R2MTRF	8.20 $\pm$ 20%	153	184	2.4	3.2	
NPIM71P100MTRF	10.0 $\pm$ 20%	180	216	2.3	2.8	

Maximum +40°C temperature rise at Irms. Typical -20% inductance change at Isat

NPIM78P Size

Part Number	STANDARD VALUES - CASE Size 78P (7 x 6.6 x 1.6)					
	Inductance Value (μ H)	Typ. DCR ($m\Omega$)	Max. DCR ($m\Omega$)	DC Current Irms (Amps)	DC Current Isat (Amps)	Test Frequency
NPIM78PR33MTRF	0.33 $\pm$ 20%	4.8	5.8	14.0	22.0	100KHz
NPIM78PR47MTRF	0.47 $\pm$ 20%	6.4	7.4	12.0	18.0	
NPIM78PR68MTRF	0.68 $\pm$ 20%	9.5	11	10.0	17.0	
NPIM78PR82MTRF	0.82 $\pm$ 20%	11.5	14	8.5	15.5	
NPIM78P1R0MTRF	1.00 $\pm$ 20%	14.5	17	7.0	14.0	
NPIM78P1R2MTRF	1.20 $\pm$ 20%	20	24	6.5	13.5	
NPIM78P1R5MTRF	1.50 $\pm$ 20%	21	25.2	6.0	13.0	
NPIM78P2R2MTRF	2.20 $\pm$ 20%	31	35	6.0	11.0	
NPIM78P3R3MTRF	3.30 $\pm$ 20%	40	46	5.0	9.0	
NPIM78P4R7MTRF	4.70 $\pm$ 20%	68	76	4.0	7.0	
NPIM78P5R6MTRF	5.60 $\pm$ 20%	78	86	3.5	6.0	
NPIM78P6R8MTRF	6.80 $\pm$ 20%	93	104	3.0	5.5	
NPIM78P8R2MTRF	8.20 $\pm$ 20%	123	140	2.6	4.5	
NPIM78P100MTRF	10.0 $\pm$ 20%	143	160	2.3	3.5	

Maximum +40°C temperature rise at Irms. Typical -20% inductance change at Isat



Contact NIC for
NPIM_P Performance Curves



NPIM72P Size

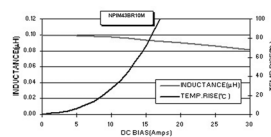
Part Number	STANDARD VALUES - CASE Size 72P (7 x 6.6 x 1.8)					
	Inductance Value (μ H)	Typ. DCR ($m\Omega$)	Max. DCR ($m\Omega$)	DC Current Irms (Amps)	DC Current Isat (Amps)	Test Frequency
NPIM72PR10YTRF	0.10 $\pm$ 30%	2.0	2.4	21	40	100KHz
NPIM72PR20YTRF	0.20 $\pm$ 30%	2.5	3.0	18	35	
NPIM72PR33MTRF	0.33 $\pm$ 20%	4.5	5.0	14	25	
NPIM72PR47MTRF	0.47 $\pm$ 20%	7.1	8.3	11.7	20	
NPIM72PR68MTRF	0.68 $\pm$ 20%	8.3	10	10.5	16	
NPIM72P1R0MTRF	1.00 $\pm$ 20%	16.5	18	8.0	14	
NPIM72P1R5MTRF	1.50 $\pm$ 20%	23	27	7.0	12	
NPIM72P2R2MTRF	2.20 $\pm$ 20%	32	37	6.0	10	
NPIM72P3R3MTRF	3.30 $\pm$ 20%	43	48	5.0	8.0	
NPIM72P4R7MTRF	4.70 $\pm$ 20%	53	60	4.5	7.0	
NPIM72P5R6MTRF	5.60 $\pm$ 20%	59	68	4.0	6.0	
NPIM72P6R8MTRF	6.80 $\pm$ 20%	63	73	4.0	5.5	
NPIM72P8R2MTRF	8.20 $\pm$ 20%	101	116	3.2	5.0	
NPIM72P100MTRF	10.0 $\pm$ 20%	134	154	2.8	4.0	

Maximum +40°C temperature rise at Irms. Typical -20% inductance change at Isat

NPIM73P Size

Part Number	STANDARD VALUES - CASE Size 73P (7 x 6.6 x 2.2)					
	Inductance Value (μ H)	Typ. DCR ($m\Omega$)	Max. DCR ($m\Omega$)	DC Current Irms (Amps)	DC Current Isat (Amps)	Test Frequency
NPIM73PR22MTRF	0.22 $\pm$ 20%	2.0	3.2	21	34	100KHz
NPIM73PR33MTRF	0.33 $\pm$ 20%	3.6	4.4	18	30	
NPIM73PR47MTRF	0.47 $\pm$ 20%	4.8	5.1	15	26	
NPIM73PR56MTRF	0.56 $\pm$ 20%	5.5	6.5	13	24	
NPIM73PR68MTRF	0.68 $\pm$ 20%	6.4	7.2	13	21	
NPIM73PR82MTRF	0.82 $\pm$ 20%	8.0	9.5	11	17	
NPIM73P1R0MTRF	1.00 $\pm$ 20%	10.5	13.5	11	16	
NPIM73P1R5MTRF	1.50 $\pm$ 20%	17	20	9.0	15	
NPIM73P2R2MTRF	2.20 $\pm$ 20%	23	28	7.0	14	
NPIM73P3R3MTRF	3.30 $\pm$ 20%	34	39	6.0	10	
NPIM73P4R7MTRF	4.70 $\pm$ 20%	41	50	5.5	9.0	
NPIM73P5R6MTRF	5.60 $\pm$ 20%	56	62	5.0	8.0	
NPIM73P6R8MTRF	6.80 $\pm$ 20%	65	72	4.0	7.0	
NPIM73P100MTRF	10.0 $\pm$ 20%	92	101	3.2	5.0	

Maximum +40°C temperature rise at Irms. Typical -20% inductance change at Isat.



Contact NIC for
NPIM_P Performance Curves

NPIM74P Size

Part Number	STANDARD VALUES - CASE Size 74P (7.3 x 6.6 x 2.8)					
	Inductance Value (μH)	Typ. DCR (mΩ)	Max. DCR (mΩ)	DC Current Irms (Amps)	DC Current Isat (Amps)	Test Frequency
NPIM74PR22YTRF	0.22 ± 30%	2.1	2.8	23.0	40.0	100KHz
NPIM74PR33MTRF	0.33 ± 20%	3.5	3.9	20.0	32.0	
NPIM74PR47MTRF	0.47 ± 20%	4.0	4.2	17.5	26.0	
NPIM74PR56MTRF	0.56 ± 20%	4.7	5.0	16.5	25.5	
NPIM74PR68MTRF	0.68 ± 20%	4.8	5.5	15.5	25.0	
NPIM74PR75MTRF	0.75 ± 20%	5.5	6.6	14.5	24.5	
NPIM74PR82MTRF	0.82 ± 20%	6.7	8.0	13.0	24.0	
NPIM74P1R0MTRF	1.00 ± 20%	8.3	10	11.0	22.0	
NPIM74P1R5MTRF	1.50 ± 20%	13	15	9.0	18.0	
NPIM74P1R8MTRF	1.80 ± 20%	14	17	8.5	16.0	
NPIM74P2R2MTRF	2.20 ± 20%	18	20	8.0	14.0	
NPIM74P2R5MTRF	2.50 ± 20%	20	22	7.0	13.0	
NPIM74P3R3MTRF	3.30 ± 20%	28	30	6.0	13.5	
NPIM74P4R7MTRF	4.70 ± 20%	37	40	5.5	10	
NPIM74P5R6MTRF	5.60 ± 20%	43	48	5.0	9.0	
NPIM74P6R8MTRF	6.80 ± 20%	54	60	4.5	8.0	
NPIM74P8R2MTRF	8.20 ± 20%	64	68	4.0	7.5	
NPIM74P100MTRF	10.0 ± 20%	75	85	3.5	6.0	
NPIM74P220MTRF	22.0 ± 20%	165	190	2.0	3.5	
NPIM74P330MTRF	33.0 ± 20%	200	240	2.0	2.5	

Maximum +40°C temperature rise at Irms. Typical -20% inductance change at Isat

NPIM84P Size

Part Number	STANDARD VALUES - CASE Size 84P (8.90 x 8.25 x 4.0)					
	Inductance Value (μH)	Typ. DCR (mΩ)	Max. DCR (mΩ)	DC Current Irms (Amps)	DC Current Isat (Amps)	Test Frequency
NPIM84PR19MTRF	0.19 ±20%	1.18	1.35	34.0	22.0	100KHz
NPIM84PR33MTRF	0.33 ±20%	1.60	2.15	27.5	16.0	
NPIM84PR47MTRF	0.47 ±20%	2.22	2.38	25.0	14.0	
NPIM84PR68MTRF	0.68 ±20%	2.90	3.22	22.2	14.5	
NPIM84PR82MTRF	0.82 ±20%	2.81	3.88	19.5	15.0	
NPIM84P1R0MTRF	1.0 ±20%	4.03	4.63	18.2	12.0	
NPIM84P2R2MTRF	2.2 ±20%	8.80	9.41	14.2	10.2	
NPIM84P3R3MTRF	3.3 ±20%	12.45	14.9	10.5	9.7	
NPIM84P4R7MTRF	4.7 ±20%	19.80	22.6	8.0	8.7	
NPIM84P5R6MTRF	5.6 ±20%	24.53	28.6	7.4	7.6	
NPIM84P6R8MTRF	6.8 ±20%	28.34	33.4	7.0	6.7	
NPIM84P8R2MTRF	8.2 ±20%	39.64	45.0	5.7	6.6	
NPIM84P100MTRF	10 ±20%	44.15	51.8	5.4	6.4	
NPIM84P150MTRF	15 ±20%	53.50	65.3	4.9	3.7	
NPIM84P220MTRF	22 ±20%	70.47	94.2	4.3	3.3	
NPIM84P330MTRF	33 ±20%	114.78	144	3.2	3.2	
NPIM84P470MTRF	47 ±20%	149.00	155	1.9	2.0	

Maximum +40°C temperature rise at Irms. Typical -30% inductance change at Isat

NPIM104P Size

Part Number	STANDARD VALUES - CASE Size 104P (11 x 10 x 3.8)					
	Inductance Value (μH)	Typ. DCR (mΩ)	Max. DCR (mΩ)	DC Current Irms (Amps)	DC Current Isat (Amps)	Test Frequency
NPIM104PR22MTRF	0.22 ± 20%	0.80	1.0	35	60	100KHz
NPIM104PR27MTRF	0.27 ± 20%	0.82	1.0	33	60	
NPIM104PR36MTRF	0.36 ± 20%	1.05	1.2	31	60	
NPIM104PR39MTRF	0.39 ± 20%	1.1	1.3	30	60	
NPIM104PR45MTRF	0.45 ± 20%	1.3	1.5	29	45	
NPIM104PR56MTRF	0.56 ± 20%	1.6	1.8	25	40	
NPIM104P1R0MTRF	1.00 ± 20%	3.0	3.3	18	36	
NPIM104P1R5MTRF	1.50 ± 20%	4.0	4.6	16	33	
NPIM104P2R2MTRF	2.20 ± 20%	6.5	7.0	12	27	
NPIM104P3R3MTRF	3.30 ± 20%	10.8	11.8	11	20	
NPIM104P4R7MTRF	4.70 ± 20%	15	15.5	10	17	
NPIM104P6R8MTRF	6.80 ± 20%	17.5	23.3	8.5	13.5	
NPIM104P8R2MTRF	8.20 ± 20%	20	22.5	8.0	12.5	
NPIM104P100MTRF	10.0 ± 20%	27	30	7.5	12	
NPIM104P150MTRF	15.0 ± 20%	40	45	6.25	10	
NPIM104P330MTRF	33.0 ± 20%	92	112	3.5	5.0	

Maximum +40°C temperature rise at Irms. Typical -20% inductance change at Isat

NPIM147P Size

Part Number	STANDARD VALUES - CASE Size 147P (13.9 x 12.8 x 7.0)					
	Inductance Value (μH)	Typ. DCR (mΩ)	Max. DCR (mΩ)	DC Current Irms (Amps)	DC Current Isat (Amps)	Test Frequency
NPIM147PR33MTRF	0.33 ±20%	0.8	0.9	46	65	100KHz
NPIM147PR47MTRF	0.47 ±20%	1.0	1.2	41	63	
NPIM147PR56MTRF	0.56 ±20%	1.2	1.4	37	62	
NPIM147PR68MTRF	0.68 ±20%	1.45	1.6	35	60	
NPIM147PR82MTRF	0.82 ±20%	1.75	1.9	33	50	
NPIM147P1R0MTRF	1 ±20%	1.85	2.0	32	50	
NPIM147P1R5MTRF	1.5 ±20%	2.6	3.0	27	45	
NPIM147P2R2MTRF	2.2 ±20%	3.7	4.2	22	40	
NPIM147P3R3MTRF	3.3 ±20%	6.2	6.8	18	35	
NPIM147P4R7MTRF	4.7 ±20%	7.4	10	15	30	
NPIM147P5R6MTRF	5.6 ±20%	9.7	11.2	13.5	26.5	
NPIM147P6R8MTRF	6.8 ±20%	7.4	14	12	17	
NPIM147P8R2MTRF	8.2 ±20%	13.4	15.5	10.5	16	
NPIM147P100MTRF	10 ±20%	13.2	16.8	10	15.5	

Maximum +40°C temperature rise at Irms. Typical -30% inductance change at Isat

NPIM187P Size

Part Number	STANDARD VALUES - CASE Size 187P (17.6 x 16.9 x 6.7)					
	Inductance Value (μ H)	Typ. DCR (m Ω)	Max. DCR (m Ω)	DC Current Irms (Amps)	DC Current Isat (Amps)	Test Frequency
NPIM187PR45MTRF	0.45 $\pm$ 20%	0.80	0.96	62.0	125	100KHz
NPIM187PR47MTRF	0.47 $\pm$ 20%	0.95	1.03	62.0	123	
NPIM187P1R0MTRF	1.0 $\pm$ 20%	1.60	2.00	52.0	70	
NPIM187P1R3MTRF	1.3 $\pm$ 20%	1.70	2.30	49.0	67	
NPIM187P1R5MTRF	1.5 $\pm$ 20%	2.00	2.50	47.0	65	
NPIM187P1R8MTRF	1.8 $\pm$ 20%	2.10	2.50	45.0	63	
NPIM187P2R2MTRF	2.2 $\pm$ 20%	2.40	2.70	43.5	62	
NPIM187P3R3MTRF	3.3 $\pm$ 20%	3.50	3.90	28.0	54	
NPIM187P4R7MTRF	4.7 $\pm$ 20%	4.80	5.50	25.0	50	
NPIM187P5R6MTRF	5.6 $\pm$ 20%	5.80	7.05	21.0	45	
NPIM187P6R8MTRF	6.8 $\pm$ 20%	8.40	9.20	19.0	39	
NPIM187P7R4MTRF	7.4 $\pm$ 20%	8.80	9.70	18.5	34	
NPIM187P8R2MTRF	8.2 $\pm$ 20%	9.60	10.8	18.0	31	
NPIM187P100MTRF	10 $\pm$ 20%	11.8	13.0	16.5	29	
NPIM187P150MTRF	15 $\pm$ 20%	17.8	20.5	12.5	27	
NPIM187P220MTRF	22 $\pm$ 20%	25.1	26.5	12.0	23	
NPIM187P330MTRF	33 $\pm$ 20%	38.0	44.0	10.7	20	
NPIM187P390MTRF	39 $\pm$ 20%	40.0	48.0	9.2	18	
NPIM187P470MTRF	47 $\pm$ 20%	48.0	55.0	8.7	16	
NPIM187P560MTRF	56 $\pm$ 20%	54.0	62.0	7.8	15	
NPIM187P680MTRF	68 $\pm$ 20%	68.0	80.0	7.0	13	
NPIM187P820MTRF	82 $\pm$ 20%	87.0	100	5.7	12	
NPIM187P101MTRF	100 $\pm$ 20%	102	118	5.3	12	

Maximum +40°C temperature rise at Irms. Typical -30% inductance change at Isat

CARRIER TAPE & REEL DIMENSIONS (mm)

Series	Qty/Reel	Reel Dia.	Ao	Bo	Co	Po	Ko	t	W
NPIM31P	4,000	330	3.5 ± 0.10	3.8 ± 0.10	5.5 ± 0.10	8.0 ± 0.10	1.5 ± 0.10	0.35 ± 0.05	12.0 ± 0.30
NPIM41P	4,000	330	4.4 ± 0.10	5.0 ± 0.10	5.5 ± 0.10	8.0 ± 0.10	1.5 ± 0.10	0.35 ± 0.05	12.0 ± 0.30
NPIM42P	3,000	330	4.4 ± 0.10	5.0 ± 0.10	5.5 ± 0.10	8.0 ± 0.10	2.3 ± 0.10	0.35 ± 0.05	12.0 ± 0.30
NPIM50P	4,000	330	5.5 ± 0.10	6.2 ± 0.10	5.5 ± 0.10	8.0 ± 0.10	1.5 ± 0.10	0.35 ± 0.05	12.0 ± 0.30
NPIM51P	3,500	330	5.5 ± 0.10	6.2 ± 0.10	5.5 ± 0.10	8.0 ± 0.10	1.8 ± 0.10	0.35 ± 0.05	12.0 ± 0.30
NPIM58P	3,000	330	5.5 ± 0.10	6.2 ± 0.10	5.5 ± 0.10	8.0 ± 0.10	2.1 ± 0.10	0.35 ± 0.05	12.0 ± 0.30
NPIM52P	3,000	330	5.5 ± 0.10	6.2 ± 0.10	5.5 ± 0.10	8.0 ± 0.10	2.3 ± 0.10	0.35 ± 0.05	12.0 ± 0.30
NPIM53P	2,000	330	5.5 ± 0.10	6.2 ± 0.10	5.5 ± 0.10	8.0 ± 0.10	3.3 ± 0.10	0.35 ± 0.05	12.0 ± 0.30
NPIM70P	3,000	330	7.0 ± 0.10	7.7 ± 0.10	7.5 ± 0.10	12.0 ± 0.10	1.5 ± 0.10	0.35 ± 0.05	16.0 ± 0.30
NPIM71P	2,000	330	7.0 ± 0.10	7.7 ± 0.10	7.5 ± 0.10	12.0 ± 0.10	1.8 ± 0.10	0.35 ± 0.05	16.0 ± 0.30
NPIM78P	2,000	330	7.0 ± 0.10	7.7 ± 0.10	7.5 ± 0.10	12.0 ± 0.10	2.1 ± 0.10	0.35 ± 0.05	16.0 ± 0.30
NPIM72P	1,500	330	7.0 ± 0.10	7.7 ± 0.10	7.5 ± 0.10	12.0 ± 0.10	2.3 ± 0.10	0.35 ± 0.05	16.0 ± 0.30
NPIM73P	1,500	330	7.0 ± 0.10	7.7 ± 0.10	7.5 ± 0.10	12.0 ± 0.10	2.7 ± 0.10	0.35 ± 0.05	16.0 ± 0.30
NPIM74P	1,000	330	7.0 ± 0.10	7.7 ± 0.10	7.5 ± 0.10	12.0 ± 0.10	3.3 ± 0.10	0.35 ± 0.05	16.0 ± 0.30
NPIM84P	1,000	330	8.45 ± 0.10	10.36 ± 0.10	11.5 ± 0.10	12.0 ± 0.10	4.5 ± 0.1	0.40 ± 0.05	24.0 ± 0.30
NPIM104P	500	330	10.4 ± 0.10	11.6 ± 0.10	11.5 ± 0.10	16.0 ± 0.10	4.5 ± 0.10	0.35 ± 0.05	24.0 ± 0.30
NPIM147P	400	330	13.5 ± 0.10	14.2 ± 0.10	11.5 ± 0.10	20.0 ± 0.10	7.3 ± 0.10	0.50 ± 0.05	24.0 ± 0.30
NPIM187P	300	330	17.5 ± 0.10	18.5 ± 0.10	14.2 ± 0.10	24.0 ± 0.10	7.5 ± 0.10	0.50 ± 0.05	32.0 ± 0.30

