



炬鹿科技有限公司
RiDEE TECH COMPANY LIMITED

Revision Date : 2023 / 11 / 09

APPROVAL SHEET

Product Name : Shielded SMD Power Inductor
Part No. : NRP Series
Description : Size 3010~8065

炬鹿科技有限公司

RiDEE TECH COMPANY LIMITED

For more contact information, please refer to our website: www.rideetech.com

Shielded SMD Power Inductor - NRP Series

■ Applications

- LED Lighting
- Consumer electronics
- Telecommunication
- Navigation systems



■ Features

- RoHS, Halogen Free and REACH Compliance
- Magnetic-resin shielded construction reduces buzz noise

■ Part Number Explanation

NRP	4012	M	1R0	T
Product Type	Size (mm)	Tolerance	Inductance	Packing
Shielded SMD Power Inductor	3010 / 3012 3015 4012 / 4018 4020 / 4030 5020 / 5040 6028 / 6045 8040 / 8065	K: $\pm 10\%$ M: $\pm 20\%$ N: $\pm 30\%$	R47=0.47 μ H R68=0.68 μ H 1R0=1.0 μ H 100=10 μ H	T: Taping



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Standard Electrical Specifications

Stamp	Inductance (uH)	NRP3010				NRP3012				NRP3015			
		DCR	Isat	Irms	SRF	DCR	Isat	Irms	SRF	DCR	Isat	Irms	SRF
		(mΩ) Max	(A) Typ	(A) Typ	(MHZ) Min	(mΩ) Max	(A) Typ	(A) Typ	(MHZ) Min	(mΩ) Max	(A) Typ	(A) Typ	(MHZ) Min
R22	0.22					30	5.30	3.00	321				
R50	0.50									39	3.90	2.60	162
R82	0.82					50	2.05	2.47	180				
1R0	1.00	85	1.40	1.45	180	60	1.87	2.20	120	39	2.32	2.35	150
1R2	1.20	95	1.25	1.45	137	72	1.80	2.01	120	52	2.21	1.95	110
1R5	1.50	104	1.27	1.30	120	75	1.62	2.01	110	65	2.30	1.70	100
1R8	1.80					98	1.30	1.65	90	65	1.75	1.70	92
2R2	2.20	143	1.15	1.09	100	105	1.20	1.55	84	78	1.60	1.60	86
2R4	2.40					110	1.15	1.60	100				
2R7	2.70	169	1.00	1.02	90	110	1.14	1.48	65	98	1.52	1.43	64
3R3	3.30	189	0.97	0.96	74	130	1.05	1.36	64	104	1.32	1.36	68
3R6	3.60	215	0.95	0.90	67	156	1.05	1.36	36	137	1.28	1.20	59
3R9	3.90					156	1.00	1.24	61	137	1.20	1.20	47
4R3	4.30									150	1.20	1.14	53
4R7	4.70	293	0.75	0.77	59	156	0.90	1.24	61	163	1.10	1.09	46
5R1	5.10									173	1.00	1.05	49
5R6	5.60	322	0.58	0.70	40	226	0.80	1.13	61				
6R2	6.20									254	1.00	0.86	46
6R8	6.80	397	0.55	0.66	42	247	0.75	0.98	61	260	0.85	0.85	39
8R2	8.20	520	0.55	0.58	23								
100	10.0	520	0.55	0.58	39	345	0.60	0.83	42	325	0.72	0.77	41
120	12.0	657	0.43	0.52	36	480	0.48	0.73	32	416	0.70	0.68	32
150	15.0	793	0.42	0.47	30	492	0.45	0.71	27	455	0.66	0.65	30
180	18.0					709	0.43	0.58	25	559	0.56	0.59	23
220	22.0	1209	0.35	0.38	28	839	0.42	0.53	23	598	0.52	0.57	23
270	27.0	1404	0.30	0.35	25	1131	0.35	0.47	21	949	0.48	0.45	22
330	33.0	2015	0.29	0.30	18	1138	0.36	0.46	18	1066	0.44	0.43	20
360	36.0					1235	0.34	0.44	18				
390	39.0	2275	0.28	0.28	18	1729	0.30	0.37	18	1294	0.41	0.39	14
430	43.0	2340	0.23	0.27	18					1378	0.37	0.37	16
470	47.0	2535	0.22	0.26	18	1885	0.27	0.35	14	1625	0.35	0.35	14
510	51.0	2860	0.21	0.25	18								
560	56.0	3016	0.21	0.24	16	1950	0.26	0.28	9.0	1664	0.33	0.34	13
620	62.0									2093	0.30	0.30	13
680	68.0					2171	0.24	0.33	7.0	3510	0.28	0.23	11
820	82.0					3302	0.17	0.27	7.0				
101	100					3718	0.21	0.25	5.0	4043	0.23	0.21	6.3
151	150									4940	0.18	0.19	4.7

Notes:

1. Test Frequency / Test Voltage : 100KHz / 1.0V
2. Operating temperature: -40 to +125°C
3. Tolerance : N:±30% ; M:±20% ; K:±10%. Please prescribe tolerance code when ordering.
4. Storage Temp: 0~40°C
5. Storage Humidity: 70% RH
6. Beyond the above specification also can meet the special requirements. For detail questions, please contact us freely.



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Standard Electrical Specifications

Stamp	Inductance (uH)	NRP0412				NRP0418			
		DCR (mΩ)	Isat (A)	Irms (A)	SRF (MHZ)	DCR (mΩ)	Isat (A)	Irms (A)	SRF (MHZ)
		Max	Typ	Typ	Min	Max	Typ	Typ	Min
R47	0.47					18	4.30	4.00	155
R68	0.68					26	4.90	3.30	128
R82	0.82	65	3.02	1.65	150				
1R0	1.00	65	2.61	1.65	120	33	4.80	2.00	80
1R5	1.50	85	2.10	1.46	90	39	3.35	1.80	65
1R8	1.80	104	2.12	1.32	88	44	3.00	2.00	54
2R2	2.20	104	1.76	1.32	74	59	2.70	1.65	52
2R7	2.70	117	1.90	1.25	71				
3R3	3.30	143	1.72	1.12	60	91	2.45	1.23	44
3R6	3.60	143	1.20	1.12	57				
4R3	4.30	182	1.58	1.00	54				
4R7	4.70	163	1.15	1.05	50	117	1.70	1.20	34
5R1	5.10	201	1.55	0.95	50				
5R6	5.60	182	1.00	1.00	42				
6R8	6.80	257	0.85	0.84	40	143	1.45	1.06	29
100	10.0	345	0.80	0.77	33	234	1.30	0.84	24
120	12.0	377	0.66	0.70	32				
150	15.0	442	0.56	0.64	25	325	0.94	0.65	19
180	18.0	611	0.55	0.55	23				
220	22.0	763	0.46	0.49	20	468	0.80	0.59	16
270	27.0	936	0.50	0.45	18	611	0.47	0.52	27
330	33.0	1053	0.42	0.42	17	689	0.56	0.49	12
360	36.0	1170	0.40	0.40	14				
390	39.0	1430	0.55	0.37	16				
470	47.0	1430	0.35	0.37	12	845	0.57	0.42	10
560	56.0	1625	0.33	0.33	11				
680	68.0	2535	0.38	0.27	11	1300	0.47	0.32	8.3
820	82.0	2782	0.28	0.26	11				
101	100	2873	0.25	0.25	9.4	2275	0.40	0.25	6.5
151	150					3250	0.31	0.22	5.5
221	220					5200	0.27	0.17	4.0

Notes:

1. Test Frequency / Test Voltage : 100KHz / 1.0V
2. Operating temperature: -40 to +125°C
3. Tolerance : N:±30% ; M:±20% ; K:±10%. Please prescribe tolerance code when ordering.
4. Storage Temp: 0~40°C
5. Storage Humidity: 70% RH
6. Beyond the above specification also can meet the special requirements. For detail questions, please contact us freely.

Standard Electrical Specifications

Stamp	Inductance (uH)	NRP0420				NRP0430			
		DCR (mΩ)	Isat (A)	Irms (A)	SRF (MHZ)	DCR (mΩ)	Isat (A)	Irms (A)	SRF (MHZ)
		Max	Typ	Typ	Min	Max	Typ	Typ	Min
R24	0.24	14	10.5	4.50	283				
R33	0.33	16	7.50	3.30	223				
R47	0.47	29	7.00	3.30	160				
R68	0.68	36	6.40	2.80	120	13	6.80	4.56	130
R91	0.91					17	6.25	4.15	100
1R0	1.00	38	4.78	2.15	75	18	5.26	4.15	70
1R2	1.20	38	5.10	2.15	72	20	5.80	3.82	80
1R5	1.50	46	4.45	1.98	71	26	4.84	3.34	62
1R8	1.80					33	5.40	3.20	60
2R2	2.20	52	3.40	1.85	49	39	4.90	2.95	52
3R3	3.30	91	3.20	1.40	44	52	3.30	2.40	38
3R6	3.60	72	2.80	1.54	49	52	3.00	2.40	37
3R9	3.90					74	3.00	2.10	32
4R3	4.30					72	2.95	2.10	37
4R7	4.70	98	2.35	1.34	42	78	2.90	2.00	31
5R1	5.10	111	2.30	1.27	42				
5R6	5.60	117	2.20	1.22	30	85	2.60	1.95	30
6R2	6.20	150	2.15	1.08	36				
6R8	6.80	163	2.20	1.04	33	117	2.75	1.60	24
7R5	7.50	150	1.85	1.08	30	110	2.20	1.65	26
8R2	8.20	163	1.75	1.04	27	117	2.10	1.60	26
100	10.0	215	1.60	0.90	26	130	1.95	1.50	21
120	12.0	228	1.50	0.88	26	175	1.70	1.30	18
150	15.0	299	1.35	0.77	24	247	1.65	1.11	16
180	18.0					260	1.40	1.10	10
220	22.0	455	1.05	0.62	15	292	1.30	1.00	10
270	27.0	709	1.02	0.50	14	338	1.15	0.90	10
330	33.0	715	0.85	0.49	11	429	1.10	0.84	10
360	36.0					436	1.05	0.83	9.8
390	39.0	845	0.82	0.46	11	566	1.03	0.73	10
430	43.0	858	0.77	0.45	10				

Notes:

1. Test Frequency / Test Voltage : 100KHz / 1.0V
2. Operating temperature: -40 to +125°C
3. Tolerance : N:±30% ; M:±20% ; K:±10%. Please prescribe tolerance code when ordering.
4. Storage Temp: 0~40°C
5. Storage Humidity: 70% RH
6. Beyond the above specification also can meet the special requirements. For detail questions, please contact us freely.

Standard Electrical Specifications

Stamp	Inductance (uH)	NRP0420				NRP0430			
		DCR (mΩ)	Isat (A)	Irms (A)	SRF (MHZ)	DCR (mΩ)	Isat (A)	Irms (A)	SRF (MHZ)
		Max	Typ	Typ	Min	Max	Typ	Typ	Min
470	47.0	923	0.74	0.44	10	579	0.95	0.72	8.4
510	51.0	975	0.70	0.42	10	611	0.90	0.70	8.4
560	56.0	1040	0.66	0.41	10	722	0.85	0.65	8.4
620	62.0	1170	0.65	0.39	9.6	761	0.80	0.63	7.0
680	68.0	1380	0.61	0.36	7.7	1128	0.72	0.52	7.0
750	75.0	1510	0.70	0.35	7.7	1326	0.70	0.48	6.3
820	82.0	1520	0.50	0.34	7.2	1378	0.66	0.47	5.6
910	91.0					1430	0.65	0.46	5.6
101	100	2020	0.48	0.31	6.3	1495	0.60	0.45	5.6
121	120					1755	0.55	0.42	5.4
151	150					2340	0.50	0.30	4.0
221	220					3250	0.40	0.35	4.2
331	330					5200	0.30	0.25	6.8
471	470					9360	0.30	0.20	2.0
501	500					9027	0.28	0.15	2.0
681	680					9854	0.19	0.14	1.2

Notes:

1. Test Frequency / Test Voltage : 100KHz / 1.0V
2. Operating temperature: -40 to +125°C
3. Tolerance : N:±30% ; M:±20% ; K:±10%. Please prescribe tolerance code when ordering.
4. Storage Temp: 0~40°C
5. Storage Humidity: 70% RH
6. Beyond the above specification also can meet the special requirements. For detail questions, please contact us freely.

Standard Electrical Specifications

Stamp	Inductance (uH)	NRP5020				NRP5040			
		DCR (mΩ)	Isat (A)	Irms (A)	SRF (MHZ)	DCR (mΩ)	Isat (A)	Irms (A)	SRF (MHZ)
		Max	Typ	Typ	Min	Max	Typ	Typ	Min
R22	0.22	11	9.00	5.30	280				
R24	0.24	11	8.00	5.30	248				
R47	0.47	17	6.15	4.60	160				
R56	0.56	22	8.50	3.80	137				
R68	0.68	22	5.50	4.00	120				
R75	0.75	22	5.50	4.00	117				
1R0	1.00	26	4.10	3.80	114	16	7.35	4.90	117
1R2	1.20	29	4.50	3.55	83	21	6.50	4.15	110
1R5	1.50	34	4.10	3.20	68	20	6.30	4.30	86
1R8	1.80					21	5.50	4.15	55
2R2	2.20	42	3.20	2.90	57	25	4.90	3.80	50
2R7	2.70	49	2.90	2.70	52	29	4.30	3.60	37
3R0	3.00	49	2.55	2.70	49	29	4.15	3.60	37
3R3	3.30	56	2.55	2.50	46	31	3.95	3.40	32
3R6	3.60	56	2.80	2.50	43	34	3.80	3.30	30
3R9	3.90	56	2.30	2.50	40	35	3.55	3.20	29
4R3	4.30	74	2.50	2.20	37				
4R7	4.70	74	2.50	2.20	37	39	3.50	3.00	28
5R1	5.10	83	2.25	2.05	32				
5R6	5.60	83	2.30	2.05	32	46	3.00	2.80	27
6R8	6.80	108	2.05	1.80	30	56	2.90	2.50	21
7R5	7.50	117	1.85	1.75	26				
8R2	8.20	127	1.85	1.65	26	62	2.70	2.30	20
9R1	9.10	143	1.70	1.55	24				
100	10.00	143	1.70	1.55	24	83	2.35	2.10	18
120	12.00	182	1.50	1.40	22				
150	15.00	215	1.35	1.25	20	112	2.00	2.00	13
180	18.00	260	1.25	1.15	16				
220	22.00	294	1.15	1.10	14	168	1.60	1.50	11
330	33.00	507	0.92	0.90	10	244	1.30	1.20	9.0
470	47.00	680	0.77	0.77	7.0	354	1.10	1.00	7.0
560	56.00	819	0.77	0.70	6.0				
680	68.00	962	0.65	0.64	6.0	520	0.90	0.80	6.0
820	82.00	1158	0.65	0.50	6.0				
101	100.00	1430	0.53	0.53	6.0	728	0.75	0.70	5.0
121	120.00	1755	0.42	0.40	6.0				
151	150.00					975	0.65	0.60	3.7
201	200.00	2600	0.30	0.40	4.5				
102	1000.00					7800	0.21	0.20	1.3

Notes:

1. Test Frequency / Test Voltage : 100KHz / 1.0V
2. Operating temperature: -40 to +125°C
3. Tolerance : N:±30% ; M:±20% ; K:±10%. Please prescribe tolerance code when ordering.
4. Storage Temp: 0~40°C
5. Storage Humidity: 70% RH
6. Beyond the above specification also can meet the special requirements. For detail questions, please contact us freely.



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Standard Electrical Specifications

Stamp	Inductance (uH)	NRP6028			
		DCR	Isat	Irms	SRF
		(mΩ) Max	(A) Typ	(A) Typ	(MHZ) Min
R50	0.50				
R68	0.68				
R82	0.82	16	6.50	5.20	97.0
1R0	1.00	13	5.75	5.20	70.0
1R2	1.20	17	6.40	4.58	69.0
1R5	1.50	17	6.00	4.58	65.0
1R8	1.80				
2R0	2.00				
2R2	2.20	26	5.10	3.75	48.0
2R7	2.70	26	3.80	3.75	48.0
3R3	3.30	33	4.15	3.48	41.0
3R9	3.90				
4R3	4.30				
4R7	4.70	39	3.00	3.08	35.0
5R1	5.10	56	3.20	2.60	32.0
5R6	5.60				
6R2	6.20	61	3.05	2.40	30.0
6R8	6.80	61	2.60	2.40	27.0
8R2	8.20	72	2.30	2.25	24.0
9R1	9.10	96	2.55	2.15	24.0
100	10.00	94	2.04	1.95	23.0
120	12.00	104	1.80	1.85	18.0
150	15.00	163	1.75	1.45	18.0
180	18.00	156	1.52	1.45	15.0
220	22.00	182	1.45	1.40	14.0
270	27.00	202	1.50	1.32	13.0
330	33.00	241	1.35	1.22	12.0
360	36.00	280	1.25	1.13	11.0
390	39.00	293	1.25	1.10	11.0
470	47.00	410	1.15	1.06	9.5
560	56.00	449	1.05	0.89	8.2
680	68.00	468	0.80	0.86	7.7
750	75.00	533	0.90	0.81	7.7
820	82.00	650	0.80	0.70	7.7
101	100.00	650	0.65	0.70	7.1
331	330.00				
401	400.00	2808	0.30	0.40	2.8
471	470.00				
102	1000.00	7540	0.18	0.23	1.5

Notes:

1. Test Frequency / Test Voltage : 100KHz / 1.0V
2. Operating temperature: -40 to +125°C
3. Tolerance : N:±30% ; M:±20% ; K:±10%. Please prescribe tolerance code when ordering.
4. Storage Temp: 0~40°C
5. Storage Humidity: 70% RH
6. Beyond the above specification also can meet the special requirements. For detail questions, please contact us freely.

Standard Electrical Specifications

Stamp	Inductance (uH)	NRP6045			
		DCR	Isat	Irms	SRF
		(mΩ) Max	(A) Typ	(A) Typ	(MHZ) Min
R47	0.47	8	15.00	6.50	155.0
R56	0.56	8	15.00	6.50	142.0
R68	0.68	8	11.00	5.70	99.0
R82	0.82	10	10.35	5.90	140.0
1R0	1.00	14	9.85	5.14	100.0
1R2	1.20	13	8.35	5.40	100.0
1R3	1.30	13	8.35	5.40	100.0
1R5	1.50	16	8.80	4.95	65.0
1R8	1.80	16	7.60	4.95	74.0
2R0	2.00				
2R2	2.20	18	6.75	4.60	52.0
2R3	2.30	27	6.00	3.50	60.0
2R7	2.70	20	5.75	4.30	38.0
3R0	3.00	26	5.60	3.80	35.0
3R3	3.30	27	5.90	3.70	32.0
3R6	3.60	27	5.25	3.70	28.0
4R3	4.30	30	4.45	3.50	23.0
4R5	4.50	34	4.97	3.30	24.0
4R7	4.70	34	4.97	3.30	24.0
5R1	5.10	34	4.40	3.30	23.0
5R6	5.60	38	4.15	3.15	23.0
6R2	6.20	40	4.43	3.00	26.0
6R3	6.30	40	4.43	3.00	26.0
6R8	6.80	40	3.90	3.00	20.0
7R5	7.50	44	3.50	2.90	18.0
8R2	8.20	56	3.90	2.60	21.0
9R1	9.10	56	3.35	2.60	17.0
100	10.00	62	3.20	2.45	15.0
120	12.00	75	2.80	2.20	13.0
150	15.00	88	2.50	2.05	12.0
180	18.00	105	2.20	1.85	10.0
220	22.00	116	2.05	1.80	10.0
270	27.00	133	1.90	1.65	9.2
300	30.00	172	1.70	1.50	7.8
330	33.00	178	1.65	1.45	7.8
360	36.00	225	1.62	1.40	7.8
390	39.00	234	1.50	1.25	7.8
430	43.00	260	1.63	1.20	7.7
470	47.00	260	1.40	1.20	6.4

Notes:

1. Test Frequency / Test Voltage : 100KHz / 1.0V
2. Operating temperature: -40 to +125°C
3. Tolerance : N:±30% ; M:±20% ; K:±10%. Please prescribe tolerance code when ordering.
4. Storage Temp: 0~40°C
5. Storage Humidity: 70% RH
6. Beyond the above specification also can meet the special requirements. For detail questions, please contact us freely.



Standard Electrical Specifications

Stamp	Inductance (uH)	NRP6045			
		DCR	Isat	Irms	SRF
		(mΩ) Max	(A) Typ	(A) Typ	(MHZ) Min
510	51.00	269	1.35	1.15	6.4
560	56.00	287	1.30	1.10	6.4
620	62.00	306	1.25	1.10	6.4
680	68.00	376	1.20	1.00	6.4
750	75.00	397	1.15	0.95	5.0
820	82.00	443	1.05	0.90	4.9
910	91.00	467	1.00	0.85	4.9
101	100.00	563	0.95	0.80	4.2
121	120.00	629	0.85	0.77	4.2
151	150.00	754	0.80	0.70	4.2
221	220.00	1084	0.70	0.59	3.5
331	330.00	1651	0.57	0.57	2.8
471	470.00	2340	0.50	0.42	2.0
681	680.00	3250	0.42	0.33	1.7
102	1000.00	5850	0.30	0.30	0.5
152	1500.00	8450	0.24	0.21	0.8

Notes:

1. Test Frequency / Test Voltage : 100KHz / 1.0V
2. Operating temperature: -40 to +125°C
3. Tolerance : N:±30% ; M:±20% ; K:±10%. Please prescribe tolerance code when ordering.
4. Storage Temp: 0~40°C
5. Storage Humidity: 70% RH
6. Beyond the above specification also can meet the special requirements. For detail questions, please contact us freely.

Standard Electrical Specifications

Stamp	Inductance (uH)	NRP8040				NRP8065			
		DCR	Isat	Irms	SRF	DCR	Isat	Irms	SRF
		(mΩ) Max	(A) Typ	(A) Typ	(MHZ) Min	(mΩ) Max	(A) Typ	(A) Typ	(MHZ) Min
R82	0.82	10.0	13.8	6.30	94				
1R0	1.00	10.0	9.85	6.30	89				
1R2	1.20	13.0	10.0	5.65	59				
1R5	1.50	13.0	8.15	5.65	67				
2R0	2.00	16.0	9.25	5.15	43				
2R2	2.20	16.0	7.10	5.15	41				
3R0	3.00	18.0	6.10	4.70	32				
3R3	3.30	22.0	6.50	4.40	27				
3R6	3.60	22.0	7.52	4.35	30				
3R9	3.90	22.0	5.75	4.35	26				
4R7	4.70	25.0	5.90	4.10	24	22	8.50	4.70	18
5R1	5.10	25.0	4.70	4.05	22				
5R6	5.60	27.0	6.00	3.85	24	26	8.00	4.50	17
6R2	6.20	27.0	4.45	3.85	20				
6R8	6.80	31.0	4.55	3.60	20	28.6	7.50	4.50	16
8R2	8.20	34.0	4.20	3.45	17	31.0	7.00	4.20	15
100	10.0	38.0	3.60	3.30	15	40.0	6.60	4.00	10
120	12.0	53.0	3.50	2.80	13				
150	15.0	61.0	2.95	2.60	12	62.0	4.80	3.60	9.6
180	18.0	69.0	2.70	2.40	11				
220	22.0	90.0	2.40	2.10	9.5	65.0	4.30	2.85	8.0
270	27.0	101	2.15	2.00	9.2				
330	33.0	126	2.05	1.80	7.8	118	3.50	2.30	6.4
360	36.0	133	2.00	1.75	7.8				
390	39.0	139	1.95	1.70	7.8				
430	43.0	147	1.90	1.65	7.8				
470	47.0	177	1.75	1.55	6.4	156	3.00	2.20	5.1
510	51.0	185	1.70	1.50	6.4				
560	56.0	192	1.55	1.45	6.4				
620	62.0	237	1.50	1.30	6.4				
680	68.0	255	1.45	1.25	4.9	230	2.70	2.10	3.1

Notes:

1. Test Frequency / Test Voltage : 100KHz / 1.0V
2. Operating temperature: -40 to +125°C
3. Tolerance : N:±30% ; M:±20% ; K:±10%. Please prescribe tolerance code when ordering.
4. Storage Temp: 0~40°C
5. Storage Humidity: 70% RH
6. Beyond the above specification also can meet the special requirements. For detail questions, please contact us freely

Standard Electrical Specifications

Stamp	Inductance (uH)	NRP8040				NRP8065			
		DCR	Isat	Irms	SRF	DCR	Isat	Irms	SRF
		(mΩ) Max	(A) Typ	(A) Typ	(MHZ) Min	(mΩ) Max	(A) Typ	(A) Typ	(MHZ) Min
750	75.0	274	1.35	1.20	4.9				
820	82.0	293	1.30	1.15	5.9	300	2.50	1.40	3.1
910	91.0	354	1.20	1.05	4.9				
101	100	377	1.15	1.00	4.2	390	2.30	1.30	2.8
121	120	434	1.05	0.95	3.5				
151	150	533	1.10	0.85	3.5	575	1.80	1.20	2.6
181	180	676	0.95	0.83	3.5				
221	220	779	0.85	0.80	3.5	988	1.40	0.90	2.0
331	330	1156	0.68	0.64	2.8	1320	1.10	0.70	1.6
431	430					1580	0.95	0.61	1.5
471	470	1625	0.60	0.50	2.1	1690	0.90	0.55	1.2
681	680	2652	0.50	0.45	1.7				
821	820					2000	0.65	0.50	1.1
102	1000	3640	0.40	0.35	1.4	2820	0.60	0.40	1.0
122	1200								
152	1500	6500	0.32	0.26	1.0	4380	0.54	0.36	0.4
302	3000					10800	0.30	0.24	0.2
472	4700					14580	0.25	0.22	0.2
682	6800					22440	0.24	0.20	0.1

Notes:

1. Test Frequency / Test Voltage : 100KHz / 1.0V
2. Operating temperature: -40 to +125°C
3. Tolerance : N:±30% ; M:±20% ; K:±10%. Please prescribe tolerance code when ordering.
4. Storage Temp: 0~40°C
5. Storage Humidity: 70% RH
6. Beyond the above specification also can meet the special requirements. For detail questions, please contact us freely

■ Type Dimension

Fig.1

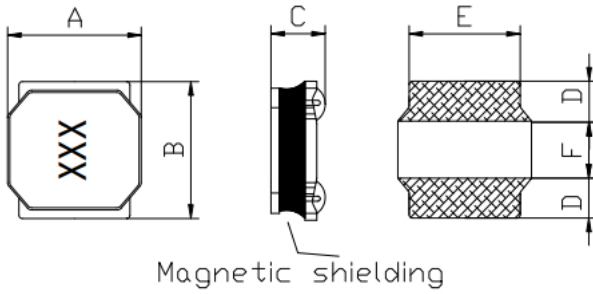
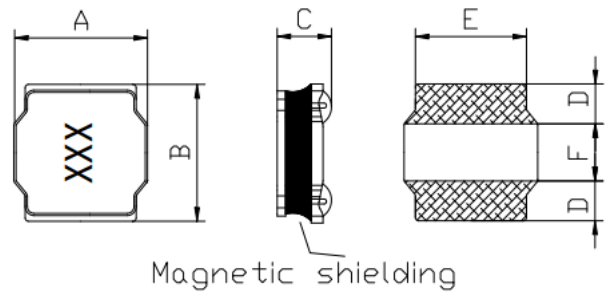
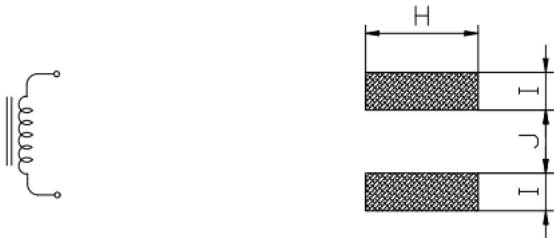


Fig.2



Electrical Schematic & PAD Layout



UNIT : mm

TYPE	A	B	C	D	E	F	H	I	J	Shape
	±0.2	±0.2	Max	Ref	Ref	Ref	Ref	Ref	Ref	
3010	3.00	3.00	1.20	0.90	2.50	1.20	2.80	1.30	0.90	Fig.1
3012	3.00	3.00	1.30	0.90	2.80	1.20	3.00	1.30	0.90	Fig.1
3015	3.00	3.00	1.50	0.90	2.60	1.20	2.90	1.30	0.90	Fig.2
4012	4.00	4.00	1.35	1.25	3.50	1.50	3.80	1.65	1.20	Fig.1
4018	4.00	4.00	1.80	1.20	3.50	1.60	3.80	1.60	1.30	Fig.1
4020	4.00	4.00	2.10	1.20	3.50	1.60	3.80	1.60	1.30	Fig.1
4030	4.00	4.00	3.00	1.35	3.50	1.30	3.80	1.75	1.00	Fig.2
5020	5.00	5.00	2.00	1.35	4.00	2.50	4.30	1.75	2.00	Fig.2
5040	5.00	5.00	4.00	1.50	4.00	2.50	4.30	1.90	1.70	Fig.1
6028	6.00	6.00	3.00	1.85	5.00	2.30	5.30	2.25	2.00	Fig.2
6045	6.00	6.00	4.50	1.65	5.00	2.70	5.30	2.05	2.40	Fig.2
8040	8.00	8.00	4.20	2.45	6.30	3.10	8.50	2.85	2.80	Fig.2
8065	8.00	8.00	6.80	2.45	6.30	3.10	8.50	2.85	2.80	Fig.2

■ Marking

The inductor is marked with a 3-digit code

Example	Nominal Value
1R0	1.0 μ H
100	10 μ H
101	100 μ H

Notes: Using Ink for marking



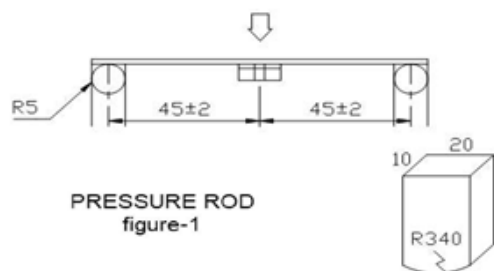
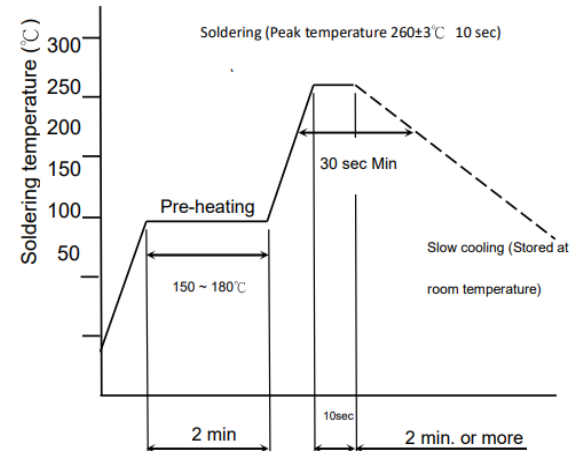
炬鹿科技有限公司

RIDEE TECH COMPANY LIMITED

■ Packaging Quantity

Type	Standard Quantity
	Reel
NRP3010	2,000 pcs / reel
NRP3012	2,000 pcs / reel
NRP3015	2,000 pcs / reel
NRP4012	4,500 pcs / reel
NRP4018	3,000 pcs / reel
NRP4020	3,000 pcs / reel
NRP4030	2,000 pcs / reel
NRP5020	2,500 pcs / reel
NRP5040	1,500 pcs / reel
NRP6028	2,000 pcs / reel
NRP6045	1,500 pcs / reel
NRP8040	1,000 pcs / reel
NRP8065	1,000 pcs / reel

Reliability test and requirement

Mechanical Reliability		
Item	Specification and Requirement	Test Method
Substrate bending	$\Delta L/L_0 \leq \pm 5\%$ There shall be no mechanical damage or electrical damage.	The sample shall be soldered onto the printed circuit board in figure 1 and a load applied until the figure in the arrow direction is made approximately 3 mm. (keep time 30 seconds) F(Pressurization) <div style="text-align: center;">  <p>PRESSURE ROD figure-1</p> </div>
Vibration	$\Delta L/L_0 \leq \pm 5\%$ There shall be no mechanical damage.	The sample shall be soldered onto the printed circuit board and when a vibration having an amplitude of 1.52mm and a frequency of from 10 to 55Hz/1 minute repeated. Should be applied to the 3 directions (X, Y, Z) for 2 hours each.(A total of 6 hours)
Solderability	New solder More than 90%.	Flux (rosin, isopropyl alcohol {JIS-K-1522}) shall be coated over the whole of the sample before hard, the sample shall then be preheated for about 2 minutes in a temperature of 130 ~ 150°C and after it has been immersed to a depth 0.5mm below for 3±0.2 seconds fully in molten solder M705 with a temperature of 245±2 . More than 90% of the electrode sections shall be covered with new solder smoothly when the sample is taken out of the solder bath.
Resistance to soldering heat. (reflow soldering)	There shall be no damage or problems.	Temperature profile of reflow soldering <div style="text-align: center;">  </div> <p>The specimen shall be passed through the reflow oven with the condition shown in the above profile for 1 time. The specimen shall be stored at standard atmospheric conditions for 1 hour, after which the measurement shall be made.</p>

Reliability test and requirement

Electrical																	
Item	Specification and Requirement	Test Method															
Insulation resistance	There shall be no other damage or problems.	DC 100V voltage shall be applied across this sample of top surface and the terminal. The insulation resistance shall be more than $1 \times 10^8 \Omega$.															
Dielectric withstand voltage	There shall be no other damage or problems.	AC 100V voltage shall be applied for 1minute across set the top surface and the terminal of this sample.															
Temperature characteristics	$\Delta L/L_{20^\circ\text{C}} \leq \pm 10\%$ $0 \sim 2000 \text{ ppm}/^\circ\text{C}$	The test shall be performed after the sample has stabilized in an ambient temperature of -40 to $+125^\circ\text{C}$, and the value calculated based on the value applicable in a normal temperature and normal humidity shall be $\Delta L/L_{20^\circ\text{C}} \leq \pm 10\%$															
Environment Characteristics																	
Item	Specification and Requirement	Test Method															
High temperature storage	$\Delta L/L_0 \leq \pm 5\%$ There shall be no mechanical damage.	The sample shall be left for 500 hours in an atmosphere with a temperature of $125 \pm 2^\circ\text{C}$ and a normal humidity. Upon completion of the measurement shall be made after the sample has been left in a normal temperature and normal humidity for 1 hour.															
Low temperature storage.	$\Delta L/L_0 \leq \pm 5\%$ There shall be no mechanical damage.	The sample shall be left for 500 hours in an atmosphere with a temperature of $-40 \pm 3^\circ\text{C}$. Upon completion of the test, the measurement shall be made after the sample has been left in a normal temperature and normal humidity for 1 hour.															
Change of temperature.	$\Delta L/L_0 \leq \pm 5\%$ There shall be no mechanical damage.	The sample shall be subject to 5 continuous cycles,such as shown in the table 2 below and then it shall be subjected to standard atmospheric conditions for 1 hour,after which measurement shall be made. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Temperature</th> <th>Duration</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>$-40 \pm 3^\circ\text{C}$ (Thermostat No.1)</td> <td>10 min.</td> </tr> <tr> <td>2</td> <td>Standard atmospheric</td> <td>5 sec. or less No.1→No.2</td> </tr> <tr> <td>3</td> <td>$125 \pm 2^\circ\text{C}$ (Thermostat No.2)</td> <td>30 min.</td> </tr> <tr> <td>4</td> <td>Standard atmospheric</td> <td>5 sec. or less No.2→No.1</td> </tr> </tbody> </table>		Temperature	Duration	1	$-40 \pm 3^\circ\text{C}$ (Thermostat No.1)	10 min.	2	Standard atmospheric	5 sec. or less No.1→No.2	3	$125 \pm 2^\circ\text{C}$ (Thermostat No.2)	30 min.	4	Standard atmospheric	5 sec. or less No.2→No.1
	Temperature	Duration															
1	$-40 \pm 3^\circ\text{C}$ (Thermostat No.1)	10 min.															
2	Standard atmospheric	5 sec. or less No.1→No.2															
3	$125 \pm 2^\circ\text{C}$ (Thermostat No.2)	30 min.															
4	Standard atmospheric	5 sec. or less No.2→No.1															
Moisture storage	$\Delta L/L_0 \leq \pm 5\%$ There shall be no mechanical damage.	The sample shall be left for 500 hours in a temperature of $40 \pm 2^\circ\text{C}$ and a humidity(RH) of 90~95%. Upon completion of the test, the measurement shall be made after the sample has been left in a normal temperature and normal humidity more than 1 hour.															