



Magnetic Resin Power Inductors-NR Series



FEATURES

- ROHS, Halogen free and REACH Compliance.
- Magnetic-resin shielded structure, ultra low buzz noise, Shielded and miniature package design.
- Constructure Low RDC and high rate current.
- Its rate current could be increased up to 30% compare to ferrite base power inductor.

APPLICATIONS

- Smartphones, tablets and wearable devices,DC-DC converter, mobile phone, PDA, LED lighting.

PRODUCT IDENTIFICATION



01 Type	
NR	Magnetic Resin Power Inductor

02 External Dimensions (LxH)(mm)	
252010	2.5x 1.0
252012	2.5x 1.2
3010	3.0x 1.0
3012	3.0x 1.2
3015	3.0x 1.5
4010	4.0x 1.0
4012	4.0x 1.2
4018	4.0x 1.8
4020	4.0x 2.0
4026	4.0x 2.6
4030	4.0x 3.0
5012	5.0x 1.2
5020	5.0x 2.0
5040	5.0x 4.0
6020	6.0x 2.0
6028	6.0x 2.8
6040	6.0x 4.0
6045	6.0x 4.5
8040	8.0x 4.0

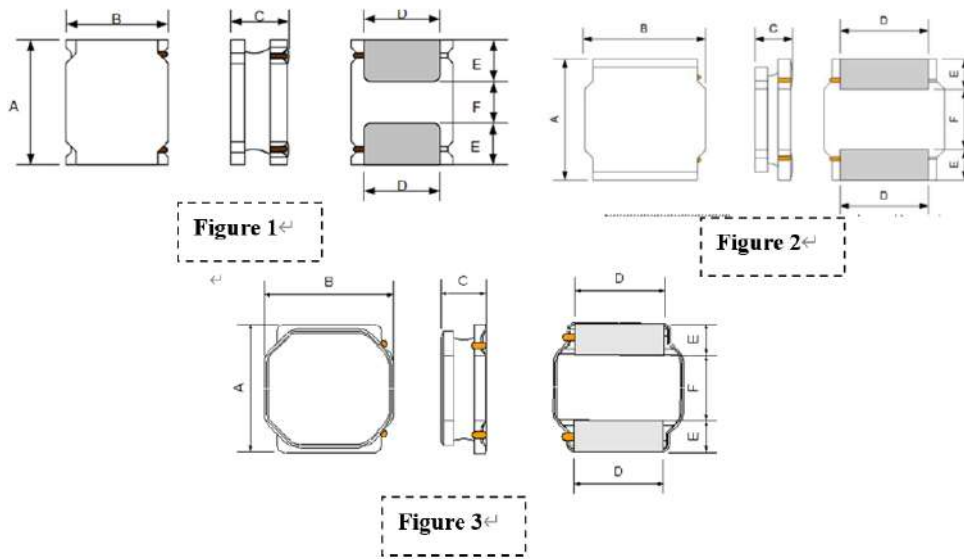
03 Nominal Inductance	
Example	Nominal value
4R7	4.7uH
470	47uH
471	470uH

04 Tolerance	
J	±5%
K	±10%
M	±20%
N	±30%

05 Packing	
T	Tape & Reel



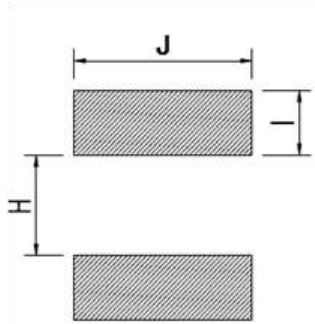
SHAPE AND DIMENSIONS



Part Number	Dimensions(mm)						Fig
	A	B	C	D	E	F	
NR252010	2.5±0.1	2.0±0.1	1.0Max	1.5±0.2	0.80±0.2	0.80±0.2	1
NR252012	2.5±0.1	2.0±0.1	1.2Max	1.5±0.2	0.80±0.2	0.80±0.2	1
NR3010	3.0±0.2	3.0±0.2	1.0max	2.5±0.2	0.75±0.2	1.5±0.2	2
NR3012	3.0±0.2	3.0±0.2	1.2max	2.5±0.2	0.75±0.2	1.5±0.2	2
NR3015	3.0±0.2	3.0±0.2	1.5max	2.5±0.2	0.75±0.2	1.5±0.2	2
NR4010	4.0±0.2	4.0±0.2	1.0max	3.3±0.2	0.95±0.2	2.1±0.2	2
NR4012	4.0±0.2	4.0±0.2	1.2max	3.3±0.2	0.95±0.2	2.1±0.2	2
NR4018	4.0±0.2	4.0±0.2	1.8max	3.3±0.2	0.95±0.2	2.1±0.2	2
NR4020	4.0±0.2	4.0±0.2	2.0max	3.3±0.2	0.95±0.2	2.1±0.2	2
NR4026	4.0±0.2	4.0±0.2	2.6max	3.3±0.2	0.95±0.2	2.1±0.2	2
NR4030	4.0±0.2	4.0±0.2	3.0max	3.3±0.2	0.95±0.2	2.1±0.2	2
NR5012	5.0±0.2	5.0±0.2	1.2max	4.0±0.2	1.25±0.2	2.5±0.2	3
NR5020	5.0±0.2	5.0±0.2	2.0max	4.0±0.2	1.25±0.2	2.5±0.2	3
NR5040	5.0±0.2	5.0±0.2	4.0max	4.0±0.2	1.25±0.2	2.5±0.2	3
NR6020	6.0±0.2	6.0±0.2	2.0max	4.9±0.2	1.55±0.2	2.9±0.2	2
NR6028	6.0±0.2	6.0±0.2	2.8max	4.9±0.2	1.55±0.2	2.9±0.2	2
NR6040	6.0±0.2	6.0±0.2	4.0max	4.9±0.2	1.55±0.2	2.9±0.2	2
NR6045	6.0±0.2	6.0±0.2	4.5max	4.9±0.2	1.55±0.2	2.9±0.2	2
NR8040	8.0±0.2	8.0±0.2	4.2max	6.3±0.2	2.0±0.2	4.0±0.2	2



RECOMMENDED PC BOARD PATTERN



Part Number	Dimensions(mm)		
	H	I	J
NR252010	0.80	0.85	2.0
NR252012	0.80	0.85	2.0
NR3010	1.5	0.8	2.7
NR3012	1.5	0.8	2.7
NR3015	1.5	0.8	2.7
NR4010	1.9	1.1	3.7
NR4012	1.9	1.1	3.7
NR4018	1.9	1.1	3.7
NR4020	1.9	1.1	3.7
NR4026	1.9	1.1	3.7
NR4030	1.9	1.1	3.7
NR5012	2.3	1.4	4.2
NR5020	2.3	1.4	4.2
NR5040	2.3	1.4	4.2
NR6020	2.8	1.7	5.7
NR6028	2.8	1.7	5.7
NR6040	2.8	1.7	5.7
NR6045	2.8	1.7	5.7
NR8040	3.8	2.2	7.5



SPECIFICATIONS

● NR252010 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR252010-R47	0.47	N	100/0.25	0.056	2500	2350
NR252010-R56	0.56	N	100/0.25	0.072	2900	2000
NR252010-R68	0.68	N	100/0.25	0.074	2200	2000
NR252010-1R0	1.0	N	100/0.25	0.108	1850	1650
NR252010-1R5	1.5	M、N	100/0.25	0.182	1800	1300
NR252010-2R2	2.2	M、N	100/0.25	0.209	1200	1200
NR252010-3R3	3.3	M、N	100/0.25	0.328	1050	900
NR252010-4R7	4.7	M、N	100/0.25	0.563	950	730
NR252010-5R6	5.6	M、N	100/0.25	0.563	800	700
NR252010-6R8	6.8	M、N	100/0.25	0.896	780	560
NR252010-100	10	M、N	100/0.25	1.092	650	500

Note: When ordering, please specify tolerance code. Tolerance: K: $\pm 10\%$ 、M: $\pm 20\%$ 、N: $\pm 30\%$;

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current

● ZNR252012 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR252012-R47	0.47	N	100/0.25	0.061	3820	2340
NR252012-R68	0.68	N	100/0.25	0.074	3280	2130
NR252012-1R0	1.0	N	100/0.25	0.090	2590	2100
NR252012-1R2	1.2	M、N	100/0.25	0.129	2380	1590
NR252012-1R5	1.5	M、N	100/0.25	0.147	2240	1530
NR252012-2R2	2.2	M、N	100/0.25	0.216	1850	1250
NR252012-2R7	2.7	M、N	100/0.25	0.239	1720	1190
NR252012-3R3	3.3	M、N	100/0.25	0.264	1610	1130
NR252012-3R6	3.6	M、N	100/0.25	0.348	1460	980
NR252012-4R3	4.3	M、N	100/0.25	0.377	1370	950
NR252012-4R7	4.7	M、N	100/0.25	0.377	1120	920



Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR252012-5R1	5.1	M、N	100/0.25	0.500	1230	820
NR252012-5R6	5.6	M、N	100/0.25	0.538	1110	800
NR252012-6R2	6.2	M、N	100/0.25	0.542	1030	800
NR252012-6R8	6.8	M、N	100/0.25	0.581	980	750
NR252012-7R5	7.5	M、N	100/0.25	0.611	970	740
NR252012-8R2	8.2	M、N	100/0.25	0.658	980	710
NR252012-9R1	9.1	M、N	100/0.25	0.690	910	680
NR252012-100	10	M、N	100/0.25	0.690	790	680
NR252012-120	12	M、N	100/0.25	1.075	780	560
NR252012-150	15	M、N	100/0.25	1.591	68	460
NR252012-220	22	M、N	100/0.25	1.976	53	410

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%、M: ±20%、N: ±30%;

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current

● **NR3010 TYPE**

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR3010-1R0	1.0	M、N	100/0.25	0.085	1450	1400
NR3010-1R2	1.2	M、N	100/0.25	0.085	1450	1250
NR3010-1R5	1.5	M、N	100/0.25	0.104	1300	1270
NR3010-2R2	2.2	M、N	100/0.25	0.143	1090	1150
NR3010-2R7	2.7	M、N	100/0.25	0.169	1020	1000
NR3010-3R3	3.3	M、N	100/0.25	0.189	960	970
NR3010-3R6	3.6	M、N	100/0.25	0.215	900	950
NR3010-4R7	4.7	M、N	100/0.25	0.293	770	750
NR3010-5R6	5.6	M、N	100/0.25	0.322	700	580
NR3010-6R8	6.8	M、N	100/0.25	0.397	660	550
NR3010-8R2	8.2	M、N	100/0.25	0.520	580	550
NR3010-100	10	M、N	100/0.25	0.520	580	550
NR3010-120	12	M、N	100/0.25	0.657	520	430



Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR3010-150	15	M、N	100/0.25	0.793	470	420
NR3010-220	22	M、N	100/0.25	1.209	380	350
NR3010-270	27	M、N	100/0.25	1.404	350	300
NR3010-330	33	M、N	100/0.25	2.015	300	290
NR3010-390	39	M、N	100/0.25	2.275	280	280
NR3010-430	43	M、N	100/0.25	2.340	270	230
NR3010-470	47	M、N	100/0.25	2.535	260	220
NR3010-510	51	M、N	100/0.25	2.860	250	210
NR3010-560	56	M、N	100/0.25	3.106	240	210

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%、M: ±20%、N: ±30%;

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current

● NR3012 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR3012-R22	0.22	N	100/0.25	0.022	5300	3000
NR3012-R82	0.82	N	100/0.25	0.039	2470	2050
NR3012-1R0	1.0	N	100/0.25	0.052	2200	1870
NR3012-1R2	1.2	N	100/0.25	0.059	2220	2010
NR3012-1R5	1.5	N	100/0.25	0.059	2010	1620
NR3012-1R8	1.8	M、N	100/0.25	0.082	1650	1300
NR3012-2R2	2.2	M、N	100/0.25	0.098	1550	1200
NR3012-2R4	2.4	M、N	100/0.25	0.088	1600	1150
NR3012-2R7	2.7	M、N	100/0.25	0.110	1480	1140
NR3012-3R3	3.3	M、N	100/0.25	0.130	1360	1050
NR3012-3R6	3.6	M、N	100/0.25	0.130	1360	1050
NR3012-3R9	3.9	M、N	100/0.25	0.189	1240	1000
NR3012-4R7	4.7	M、N	100/0.25	0.156	1240	900
NR3012-5R6	5.6	M、N	100/0.25	0.226	1130	800
NR3012-6R8	6.8	M、N	100/0.25	0.247	980	750



Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR3012-100	10	M、N	100/0.25	0.345	830	600
NR3012-120	12	M、N	100/0.25	0.449	730	480
NR3012-150	15	M、N	100/0.25	0.468	710	450
NR3012-180	18	M、N	100/0.25	0.709	580	430
NR3012-220	22	M、N	100/0.25	0.839	530	420
NR3012-270	27	M、N	100/0.25	1.131	470	350
NR3012-330	33	M、N	100/0.25	1.138	460	360
NR3012-360	36	M、N	100/0.25	1.235	440	340
NR3012-390	39	M、N	100/0.25	1.729	370	300
NR3012-470	47	M、N	100/0.25	1.885	350	270
NR3012-560	56	M、N	100/0.25	1.994	340	260
NR3012-680	68	M、N	100/0.25	2.171	330	240
NR3012-820	82	M、N	100/0.25	3.302	270	220
NR3012-101	100	M、N	100/0.25	3.718	250	210

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%, M: ±20%, N: ±30%;
 1. Operating temperature range -40 -125°C
 2. Isat for Inductance drop 30% from its value without current

● NR3015 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR3015-R50	0.50	N	100/0.25	0.039	3900	2600
NR3015-1R0	1.0	N	100/0.25	0.039	2320	2350
NR3015-1R2	1.2	N	100/0.25	0.052	2210	1950
NR3015-1R5	1.5	N	100/0.25	0.065	2300	1700
NR3015-1R8	1.8	N	100/0.25	0.065	1750	1700
NR3015-2R2	2.2	M、N	100/0.25	0.078	1600	1600
NR3015-2R7	2.7	M、N	100/0.25	0.098	1520	1460
NR3015-3R3	3.3	M、N	100/0.25	0.104	1320	1360
NR3015-3R6	3.6	M、N	100/0.25	0.137	1280	1200
NR3015-3R9	3.9	M、N	100/0.25	0.137	1200	1200
NR3015-4R3	4.3	M、N	100/0.25	0.150	1200	1140



Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR3015-4R7	4.7	M、N	100/0.25	0.163	1100	1090
NR3015-5R1	5.1	M、N	100/0.25	0.173	1000	1050
NR3015-6R2	6.2	M、N	100/0.25	0.254	1000	860
NR3015-6R8	6.8	M、N	100/0.25	0.260	850	850
NR3015-100	10	M、N	100/0.25	0.325	720	770
NR3015-120	12	M、N	100/0.25	0.416	700	680
NR3015-150	15	M、N	100/0.25	0.455	660	650
NR3015-180	18	M、N	100/0.25	0.559	560	590
NR3015-220	22	M、N	100/0.25	0.589	520	570
NR3015-270	27	M、N	100/0.25	0.949	480	450
NR3015-330	33	M、N	100/0.25	1.066	440	430
NR3015-390	39	M、N	100/0.25	1.294	410	390
NR3015-430	43	M、N	100/0.25	1.378	370	370
NR3015-470	47	M、N	100/0.25	1.625	350	350
NR3015-560	56	M、N	100/0.25	1.664	330	340
NR3015-620	62	M、N	100/0.25	2.093	300	300
NR3015-680	68	M、N	100/0.25	3.510	280	230
NR3015-101	100	M、N	100/0.25	4.043	230	210
NR3015-151	150	M、N	100/0.25	4.940	180	190

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%、M: ±20%、N: ±30%;

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current

● NR4010 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR4010-1R0	1.0	N	100/0.25	0.067	2000	1900
NR4010-1R5	1.5	N	100/0.25	0.084	1680	1700
NR4010-2R2	2.2	M、N	100/0.25	0.102	1200	1500
NR4010-3R3	3.3	M、N	100/0.25	0.120	1100	1400
NR4010-4R7	4.7	M、N	100/0.25	0.168	950	1200



Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR4010-6R8	6.8	M、N	100/0.25	0.240	800	1000
NR4010-100	10	M、N	100/0.25	0.360	620	750
NR4010-150	15	M、N	100/0.25	0.516	540	600
NR4010-220	22	M、N	100/0.25	0.684	450	500

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%、M: ±20%、N: ±30%;

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current

● **NR4012 TYPE**

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR4012-R82	0.82	N	100/0.25	0.065	3020	1650
NR4012-1R0	1.0	N	100/0.25	0.065	2610	1650
NR4012-1R5	1.5	N	100/0.25	0.085	2100	1460
NR4012-1R8	1.8	N	100/0.25	0.104	2120	1320
NR4012-2R2	2.2	N	100/0.25	0.104	1760	1320
NR4012-2R7	2.7	N	100/0.25	0.117	1900	1250
NR4012-3R3	3.3	N	100/0.25	0.143	1720	1120
NR4012-3R6	3.6	M、N	100/0.25	0.143	1300	1080
NR4012-4R3	4.3	M、N	100/0.25	0.182	1280	1000
NR4012-4R7	4.7	M、N	100/0.25	0.163	1150	1050
NR4012-5R1	5.1	M、N	100/0.25	0.201	1050	950
NR4012-5R6	5.6	M、N	100/0.25	0.182	1000	1000
NR4012-6R8	6.8	M、N	100/0.25	0.257	850	840
NR4012-100	10	M、N	100/0.25	0.345	800	770
NR4012-120	12	M、N	100/0.25	0.377	660	700
NR4012-150	15	M、N	100/0.25	0.442	560	640
NR4012-220	22	M、N	100/0.25	0.653	530	570
NR4012-270	27	M、N	100/0.25	0.936	500	450
NR4012-330	33	M、N	100/0.25	1.053	420	420
NR4012-360	36	M、N	100/0.25	1.170	400	400



Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR4012-390	39	M、N	100/0.25	1.430	550	370
NR4012-470	47	M、N	100/0.25	1.430	350	370
NR4012-560	56	M、N	100/0.25	1.625	330	330
NR4012-680	68	M、N	100/0.25	2.535	380	270
NR4012-820	82	M、N	100/0.25	2.782	280	260
NR4012-101	100	M、N	100/0.25	2.783	250	250

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%, M: ±20%, N: ±30%;

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current

● **NR4018 TYPE**

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR4018-R68	0.68	N	100/0.25	0.026	4900	3300
NR4018-1R0	1.0	N	100/0.25	0.033	4800	2000
NR4018-1R5	1.5	N	100/0.25	0.039	3350	1800
NR4018-1R8	1.8	N	100/0.25	0.044	3000	1700
NR4018-2R2	2.2	N	100/0.25	0.059	2700	1650
NR4018-3R3	3.3	N	100/0.25	0.091	2450	1230
NR4018-4R7	4.7	M、N	100/0.25	0.117	1700	1200
NR4018-6R8	6.8	M、N	100/0.25	0.143	1450	1060
NR4018-100	10	M、N	100/0.25	0.234	1300	840
NR4018-150	15	M、N	100/0.25	0.325	940	650
NR4018-220	22	M、N	100/0.25	0.468	800	590
NR4018-270	27	M、N	100/0.25	0.611	470	520
NR4018-330	33	M、N	100/0.25	0.689	560	490
NR4018-470	47	M、N	100/0.25	0.845	570	420
NR4018-680	68	M、N	100/0.25	1.300	470	320
NR4018-101	100	M、N	100/0.25	2.275	400	250
NR4018-151	150	M、N	100/0.25	3.250	310	220
NR4018-221	220	M、N	100/0.25	5.200	270	170



● NR4020 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR4020-R47	0.47	N	100/0.25	0.029	7000	3300
NR4020-R68	0.68	N	100/0.25	0.036	6400	2800
NR4020-1R0	1.0	N	100/0.25	0.038	4780	2150
NR4020-1R2	1.2	N	100/0.25	0.038	5100	1080
NR4020-1R5	1.5	N	100/0.25	0.046	4450	1980
NR4020-2R2	2.2	N	100/0.25	0.052	3400	1850
NR4020-3R3	3.3	M、N	100/0.25	0.091	3200	1600
NR4020-3R6	3.6	M、N	100/0.25	0.072	2800	1540
NR4020-4R7	4.7	M、N	100/0.25	0.098	2350	1340
NR4020-5R6	5.6	M、N	100/0.25	0.117	2200	1220
NR4020-6R2	6.2	M、N	100/0.25	0.150	2150	1080
NR4020-6R8	6.8	M、N	100/0.25	0.163	1900	1040
NR4020-7R5	7.5	M、N	100/0.25	0.150	1850	1080
NR4020-8R2	8.2	M、N	100/0.25	0.163	1750	1040
NR4020-100	10	M、N	100/0.25	0.215	1600	900
NR4020-120	12	M、N	100/0.25	0.228	1500	880
NR4020-220	22	M、N	100/0.25	0.455	1050	620
NR4020-270	27	M、N	100/0.25	0.709	1020	500
NR4020-330	33	M、N	100/0.25	0.715	850	490
NR4020-390	39	M、N	100/0.25	0.845	820	460
NR4020-430	43	M、N	100/0.25	0.858	770	450
NR4020-470	47	M、N	100/0.25	0.923	740	440
NR4020-510	51	M、N	100/0.25	0.975	700	420
NR4020-560	56	M、N	100/0.25	1.040	660	410
NR4020-620	62	M、N	100/0.25	1.170	650	390
NR4020-680	68	M、N	100/0.25	1.380	610	360
NR4020-750	75	M、N	100/0.25	1.510	700	350
NR4020-820	82	M、N	100/0.25	1.520	500	340
NR4020-101	100	M、N	100/0.25	2.020	480	310



● NR4026 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR4026-1R0	1.0	N	100/0.25	0.031	3300	3000
NR4026-1R2	1.2	N	100/0.25	0.039	3100	2300
NR4026-1R5	1.5	N	100/0.25	0.039	2400	2300
NR4026-2R2	2.2	N	100/0.25	0.052	2100	200
NR4026-3R3	3.3	M、N	100/0.25	0.065	1800	1700
NR4026-4R7	4.7	M、N	100/0.25	0.072	1450	1600
NR4026-6R8	6.8	M、N	100/0.25	0.085	1300	1500
NR4026-100	10	M、N	100/0.25	0.110	1000	1300
NR4026-150	15	M、N	100/0.25	0.143	900	1100
NR4026-220	22	M、N	100/0.25	0.214	600	900
NR4026-330	33	M、N	100/0.25	0.351	550	700
NR4026-470	47	M、N	100/0.25	0.390	400	650

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%、M: ±20%、N: ±30%;

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current

● NR4030 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR4030-R68	0.68	N	100/0.25	0.013	6800	4560
NR4030-R91	0.91	N	100/0.25	0.017	6250	4150
NR4030-1R0	1.0	N	100/0.25	0.018	5260	4150
NR4030-1R2	1.2	N	100/0.25	0.020	5800	3820
NR4030-1R5	1.5	M、N	100/0.25	0.026	4840	3340
NR4030-1R8	1.8	M、N	100/0.25	0.033	4400	3200
NR4030-2R2	2.2	M、N	100/0.25	0.039	3900	2950
NR4030-3R3	3.3	M、N	100/0.25	0.052	3300	2400
NR4030-3R6	3.6	M、N	100/0.25	0.052	3000	2400
NR4030-3R9	3.9	M、N	100/0.25	0.064	3000	2100



● NR4030 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR4030-4R7	4.7	M、N	100/0.25	0.078	2900	2000
NR4030-5R6	5.6	M、N	100/0.25	0.085	2600	1950
NR4030-6R8	6.8	M、N	100/0.25	0.097	2750	1600
NR4030-7R5	7.5	M、N	100/0.25	0.110	2200	1650
NR4030-8R2	8.2	M、N	100/0.25	0.117	2100	1600
NR4030-100	10	M、N	100/0.25	0.130	1950	1500
NR4030-120	12	M、N	100/0.25	0.175	1700	1300
NR4030-150	15	M、N	100/0.25	0.247	1650	1110
NR4030-180	18	M、N	100/0.25	0.260	1400	1100
NR4030-220	22	M、N	100/0.25	0.292	1300	1000
NR4030-270	27	M、N	100/0.25	0.338	1150	900
NR4030-330	33	M、N	100/0.25	0.429	1100	840
NR4030-360	36	M、N	100/0.25	0.436	1050	830
NR4030-390	39	M、N	100/0.25	0.566	1030	730
NR4030-470	47	M、N	100/0.25	0.579	950	720
NR4030-560	56	M、N	100/0.25	0.722	850	650
NR4030-680	68	M、N	100/0.25	1.128	720	520
NR4030-820	82	M、N	100/0.25	1.378	660	470
NR4030-910	91	M、N	100/0.25	1.430	650	460
NR4030-101	100	M、N	100/0.25	1.495	600	450
NR4030-121	120	M、N	100/0.25	1.755	550	420
NR4030-151	150	M、N	100/0.25	2.340	500	300
NR4030-221	220	M、N	100/0.25	3.250	400	350
NR4030-331	330	M、N	100/0.25	5.200	300	250
NR4030-471	470	M、N	100/0.25	9.027	300	200
NR4030-501	500	M、N	100/0.25	9.360	280	150
NR4030-681	680	M、N	100/0.25	9.854	190	140

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%、M: ±20%、N: ±30%;

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current



● NR5012 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR5012-R22	0.22	N	100/0.25	0.078	2900	2000
NR5012-1R0	1.0	N	100/0.25	0.085	2600	1950
NR5012-1R5	1.5	M、N	100/0.25	0.097	2750	1600
NR5012-2R2	2.2	M、N	100/0.25	0.110	2200	1650
NR5012-3R3	3.3	M、N	100/0.25	0.117	2100	1600
NR5012-4R7	4.7	M、N	100/0.25	0.130	1950	1500
NR5012-6R8	6.8	M、N	100/0.25	0.175	1700	1300
NR5012-100	10	M、N	100/0.25	0.247	1650	1110
NR5012-150	15	M、N	100/0.25	0.260	1400	1100
NR5012-220	22	M、N	100/0.25	0.292	1300	1000

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%、M: ±20%、N: ±30%;

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current

● NR5020 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR5020-R22	0.22	N	100/0.25	0.011	9000	5300
NR5020-R47	0.47	N	100/0.25	0.017	6150	4600
NR5020-R56	0.56	N	100/0.25	0.022	5700	4000
NR5020-R68	0.68	N	100/0.25	0.022	5500	4000
NR5020-R75	0.75	N	100/0.25	0.022	5500	4000
NR5020-1R0	1.0	N	100/0.25	0.026	4100	3800
NR5020-1R2	1.2	N	100/0.25	0.029	4500	3550
NR5020-1R5	1.5	M、N	100/0.25	0.034	4100	3200
NR5020-2R2	2.2	M、N	100/0.25	0.042	3200	2900
NR5020-2R7	2.7	M、N	100/0.25	0.049	2900	2700
NR5020-3R0	3.0	M、N	100/0.25	0.049	2550	2700
NR5020-3R3	3.3	M、N	100/0.25	0.056	2550	2500
NR5020-3R6	3.6	M、N	100/0.25	0.056	2800	2500



● NR5020 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR5020-3R9	3.9	M、N	100/0.25	0.056	2300	2500
NR5020-4R3	4.3	M、N	100/0.25	0.074	2500	2200
NR5020-4R7	4.7	M、N	100/0.25	0.074	2500	2200
NR5020-5R1	5.1	M、N	100/0.25	0.083	2250	2050
NR5020-5R6	5.6	M、N	100/0.25	0.083	2300	2050
NR5020-6R8	6.8	M、N	100/0.25	0.108	2050	1800
NR5020-7R5	7.5	M、N	100/0.25	0.117	1850	1750
NR5020-8R2	8.2	M、N	100/0.25	0.127	1850	1650
NR5020-9R1	9.1	M、N	100/0.25	0.143	1700	1550
NR5020-100	10	M、N	100/0.25	0.143	1700	1550
NR5020-120	12	M、N	100/0.25	0.182	1500	1400
NR5020-150	15	M、N	100/0.25	0.215	1350	1250
NR5020-180	18	M、N	100/0.25	0.260	1250	1150
NR5020-220	22	M、N	100/0.25	0.294	1150	1100
NR5020-330	33	M、N	100/0.25	0.507	920	900
NR5020-470	47	M、N	100/0.25	0.680	770	770
NR5020-560	56	M、N	100/0.25	0.819	770	700
NR5020-680	68	M、N	100/0.25	0.962	650	640
NR5020-820	82	M、N	100/0.25	1.158	650	500
NR5020-101	100	M、N	100/0.25	1.430	530	530
NR5020-121	120	M、N	100/0.25	1.755	420	400
NR5020-201	200	M、N	100/0.25	2.600	300	400

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%、M: ±20%、N: ±30%;

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current



● NR5040 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR5040-1R0	1.0	M、N	100/0.25	0.016	7350	4900
NR5040-1R2	1.2	M、N	100/0.25	0.020	6500	4300
NR5040-1R5	1.5	M、N	100/0.25	0.021	6300	4150
NR5040-1R8	1.8	M、N	100/0.25	0.021	5500	4150
NR5040-2R2	2.2	M、N	100/0.25	0.025	4900	3800
NR5040-2R7	2.7	M、N	100/0.25	0.029	4300	3600
NR5040-3R0	3.0	M、N	100/0.25	0.029	4150	3600
NR5040-3R3	3.3	M、N	100/0.25	0.031	3950	3400
NR5040-3R6	3.6	M、N	100/0.25	0.034	3800	3300
NR5040-3R9	3.9	M、N	100/0.25	0.035	3550	3200
NR5040-4R7	4.7	M、N	100/0.25	0.039	3500	3000
NR5040-5R6	5.6	M、N	100/0.25	0.046	3000	2800
NR5040-6R8	6.8	M、N	100/0.25	0.056	2900	2500
NR5040-8R2	8.2	M、N	100/0.25	0.062	2700	2300
NR5040-100	10	M、N	100/0.25	0.083	2350	2100
NR5040-150	15	M、N	100/0.25	0.112	2000	2000
NR5040-220	22	M、N	100/0.25	0.168	1600	1500
NR5040-330	33	M、N	100/0.25	0.244	1300	1200
NR5040-470	47	M、N	100/0.25	0.354	1100	1000
NR5040-670	68	M、N	100/0.25	0.520	900	800
NR5040-101	100	M、N	100/0.25	0.728	750	700
NR5040-151	150	M、N	100/0.25	0.975	650	600
NR5040-101	1000	K、M	100/0.25	7.800	210	200

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%、M: ±20%、N: ±30%;

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current



● NR6020 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR6020-R50	0.50	M、N	100/0.25	0.018	4500	4000
NR6020-R68	0.68	M、N	100/0.25	0.022	6550	3800
NR6020-R82	0.82	M、N	100/0.25	0.022	5300	3800
NR6020-1R0	1.0	M、N	100/0.25	0.024	4150	3500
NR6020-1R2	1.2	M、N	100/0.25	0.029	55900	3200
NR6020-1R5	1.5	M、N	100/0.25	0.029	4250	3200
NR6020-1R8	1.8	M、N	100/0.25	0.036	4850	2750
NR6020-2R0	2.0	M、N	100/0.25	0.036	4100	2650
NR6020-2R2	2.2	M、N	100/0.25	0.036	3750	2600
NR6020-2R7	2.7	M、N	100/0.25	0.046	3900	2600
NR6020-3R3	3.3	M、N	100/0.25	0.046	3150	2600
NR6020-3R9	3.9	M、N	100/0.25	0.064	3250	2100
NR6020-4R3	4.3	M、N	100/0.25	0.064	2700	2100
NR6020-4R7	4.7	M、N	100/0.25	0.075	3000	2000
NR6020-5R6	5.6	M、N	100/0.25	0.075	2400	1900
NR6020-6R2	6.2	M、N	100/0.25	0.103	2300	1800
NR6020-6R8	6.8	M、N	100/0.25	0.103	2200	1800
NR6020-8R2	8.2	M、N	100/0.25	0.137	2100	1400
NR6020-100	10	M、N	100/0.25	0.137	1750	1400
NR6020-120	12	M、N	100/0.25	0.156	1450	1300
NR6020-150	15	M、N	100/0.25	0.189	1200	1200
NR6020-180	18	M、N	100/0.25	0.234	1200	1080
NR6020-220	22	M、N	100/0.25	0.265	1050	1000
NR6020-330	33	M、N	100/0.25	0.390	950	840
NR6020-470	47	M、N	100/0.25	0.559	800	700
NR6020-331	330	M、N	100/0.25	3.419	330	270

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%, M: ±20%, N: ±30%;

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current



● NR6028 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR6028-R82	0.82	M、N	100/0.25	0.016	6500	5200
NR6028-1R0	1.0	M、N	100/0.25	0.017	5750	5200
NR6028-1R2	1.2	M、N	100/0.25	0.017	6400	4580
NR6028-1R5	1.5	M、N	100/0.25	0.017	6000	4580
NR6028-2R2	2.2	M、N	100/0.25	0.026	5100	3750
NR6028-2R7	2.7	M、N	100/0.25	0.026	3800	3750
NR6028-3R3	3.3	M、N	100/0.25	0.033	4150	3480
NR6028-4R7	4.7	M、N	100/0.25	0.039	3000	3080
NR6028-5R1	5.1	M、N	100/0.25	0.056	3200	2600
NR6028-6R2	6.2	M、N	100/0.25	0.061	3050	2400
NR6028-6R8	6.8	M、N	100/0.25	0.061	2600	2400
NR6028-8R2	8.2	M、N	100/0.25	0.072	2300	2250
NR6028-100	10	M、N	100/0.25	0.094	2040	1950
NR6028-120	12	M、N	100/0.25	0.104	1800	1850
NR6028-150	15	M、N	100/0.25	0.163	1750	1450
NR6028-180	18	M、N	100/0.25	0.156	1520	1450
NR6028-220	22	M、N	100/0.25	0.182	1450	1400
NR6028-270	27	M、N	100/0.25	0.202	1500	1320
NR6028-330	33	M、N	100/0.25	0.241	1350	1220
NR6028-360	36	M、N	100/0.25	0.280	1250	1130
NR6028-390	39	M、N	100/0.25	0.293	1250	1100
NR6028-470	47	M、N	100/0.25	0.410	1150	1060
NR6028-560	56	M、N	100/0.25	0.449	1050	890
NR6028-680	68	M、N	100/0.25	0.468	800	860
NR6028-750	75	M、N	100/0.25	0.533	900	810
NR6028-820	82	M、N	100/0.25	0.650	800	700
NR6028-101	100	M、N	100/0.25	0.650	650	700
NR6028-401	400	M、N	100/0.25	2.808	300	400
NR6028-102	1000	K、M	100/0.25	7.540	180	230



● NR6040 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR6040-1R0	1.0	M、N	100/0.25	0.010	7850	6300
NR6040-100	10	M、N	100/0.25	0.062	3200	2450
NR6040-120	12	M、N	100/0.25	0.075	2800	2200
NR6040-150	15	M、N	100/0.25	0.088	2500	2050
NR6040-220	22	M、N	100/0.25	0.116	2050	1800
NR6040-330	33	M、N	100/0.25	0.178	1650	1450
NR6040-680	68	M、N	100/0.25	0.370	1150	950
NR6040-471	470	M、N	100/0.25	2.500	420	470

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%, M: ±20%, N: ±30%;

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current

● NR6045 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR6045-R47	0.47	N	100/0.25	0.008	15000	6500
NR6045-R56	0.56	N	100/0.25	0.008	15000	6500
NR6045-R68	0.68	N	100/0.25	0.008	11000	5700
NR6045-R82	0.82	N	100/0.25	0.010	10350	5900
NR6045-1R0	1.0	N	100/0.25	0.014	9850	5140
NR6045-1R2	1.2	N	100/0.25	0.013	8350	5400
NR6045-1R5	1.5	M、N	100/0.25	0.016	8800	4950
NR6045-1R8	1.8	M、N	100/0.25	0.016	7600	4950
NR6045-2R2	2.2	M、N	100/0.25	0.018	6750	4600
NR6045-2R7	2.7	M、N	100/0.25	0.020	5750	4300
NR6045-3R3	3.3	M、N	100/0.25	0.027	5900	3700
NR6045-3R9	3.9	M、N	100/0.25	0.027	5250	3700
NR6045-4R7	4.7	M、N	100/0.25	0.034	4970	3300
NR6045-5R1	5.1	M、N	100/0.25	0.034	4400	3300
NR6045-5R6	5.6	M、N	100/0.25	0.038	4150	3150



● NR8040 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR8040-R82	0.82	N	100/0.25	0.010	13800	6300
NR8040-1R0	1.0	N	100/0.25	0.010	9850	6300
NR8040-1R2	1.2	N	100/0.25	0.013	10000	5650
NR8040-1R5	1.5	N	100/0.25	0.013	8150	5650
NR8040-2R0	2.0	N	100/0.25	0.016	9250	5150
NR8040-2R2	2.2	M、N	100/0.25	0.016	7100	5150
NR8040-3R0	3.0	M、N	100/0.25	0.018	6100	4700
NR8040-3R3	3.3	M、N	100/0.25	0.022	6500	4400
NR8040-3R6	3.6	M、N	100/0.25	0.022	7520	4350
NR8040-3R9	3.9	M、N	100/0.25	0.022	5750	4350
NR8040-4R7	4.7	M、N	100/0.25	0.025	5900	4100
NR8040-5R1	5.1	M、N	100/0.25	0.025	4700	4050
NR8040-5R6	5.6	M、N	100/0.25	0.027	6000	3850
NR8040-6R2	6.2	M、N	100/0.25	0.027	4450	3850
NR8040-6R8	6.8	M、N	100/0.25	0.031	4550	3600
NR8040-8R2	8.2	M、N	100/0.25	0.034	4200	3450
NR8040-100	10	M、N	100/0.25	0.038	3600	3300
NR8040-120	12	M、N	100/0.25	0.053	3500	2800
NR8040-150	15	M、N	100/0.25	0.061	2950	2600
NR8040-180	18	M、N	100/0.25	0.069	3700	2400
NR8040-220	22	M、N	100/0.25	0.090	2400	2100
NR8040-270	27	M、N	100/0.25	0.101	2150	2000
NR8040-330	33	M、N	100/0.25	0.126	2050	1800
NR8040-360	36	M、N	100/0.25	0.133	2000	1750
NR8040-390	39	M、N	100/0.25	0.139	1950	1700
NR8040-430	43	M、N	100/0.25	0.147	1900	1650
NR8040-470	47	M、N	100/0.25	0.177	1750	1550
NR8040-510	51	M、N	100/0.25	0.185	1700	1500
NR8040-560	56	M、N	100/0.25	0.192	1550	1450



● NR8040 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Saturation Current Max (mA)	Rated Current Max (mA)
NR8040-620	62	M、N	100/0.25	0.237	1500	1300
NR8040-680	68	M、N	100/0.25	0.255	1450	1250
NR8040-750	75	M、N	100/0.25	0.274	1350	1200
NR8040-820	82	M、N	100/0.25	0.293	1300	1150
NR8040-910	91	M、N	100/0.25	0.354	1200	1050
NR8040-101	100	K、M	100/0.25	0.377	1150	1000
NR8040-121	120	K、M	100/0.25	0.434	1050	950
NR8040-151	150	K、M	100/0.25	0.533	1100	850
NR8040-181	180	K、M	100/0.25	0.676	950	830
NR8040-221	220	K、M	100/0.25	0.779	850	800
NR8040-331	330	K、M	100/0.25	1.156	680	640
NR8040-471	470	K、M	100/0.25	1.625	600	500
NR8040-681	680	K、M	100/0.25	2.665	500	450
NR8040-102	1000	K、M	100/0.25	3.640	400	350
NR8040-152	1500	K、M	100/0.25	6.500	320	260

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%、M: ±20%、N: ±30%;

1. Operating temperature range -40 -125°C

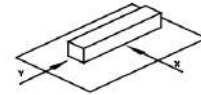
2. Isat for Inductance drop 30% from its value without current



DETAIL ELECTRICAL CHARACTERISTICS

1. Operating temperature range: -40 to + 105°C(Includes temperature when the coil is heated) .
2. External appearance: On visual inspection, the coil has no external defects.
3. Terminal strength: After soldering. Between copper plate and terminals of coil. Push in two directions of X.Y

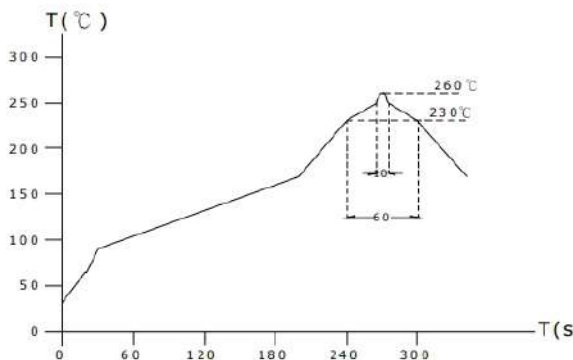
withstanding at below conditions.



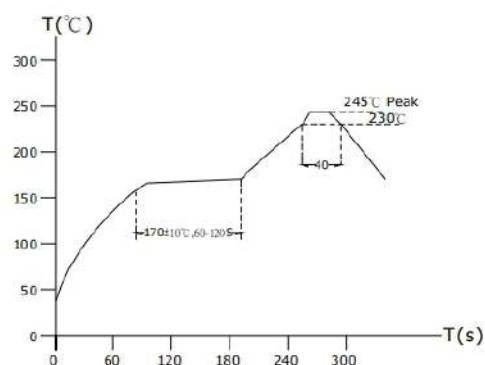
Terminal should not peel off. (refer to figure at right) 5. 0N 60 sec.

4. Insulating resistance: Over 100MΩ at 100V D.C. between coil and core.
5. Dielectric strength: No dielectric breakdown at 100V D.C. for 1 minute between coil and core.
6. Temperature characteristics: Inductance coefficient $(0\sim 2,000)\times 10^{-6}/^{\circ}\text{C}$ (-25~+80°C degree Celsius), inductance deviation within $\pm 5.0\%$, after 96 hours.
7. Humidity characteristics(Moisture Resistance): Inductance deviation within $\pm 5\%$, after 96 hours in 90~95% relative humidity at $40 \pm 2^{\circ}\text{C}$ and 1 hour drying under normal condition.
8. Vibration resistance: Inductance deviation within $\pm 5\%$, after vibration for 1 hour. In each of three orientations at sweep vibration (10~55~10 Hz) with 1.5mm P-P amplitudes.
9. Shock resistance: Inductance deviation within $\pm 5\%$, after being dropped once with 981m/s² (100G) shock attitude upon a rubber block method shock testing machine, in three different orientations.
10. Resistance to Soldering Heat: 260°C, 10 seconds(See attached recommend reflow) .
11. Storage condition: Temperature Range: 0°C ~ 35°C; -40°C ~ 105°C (after PCB), Humidity Range: 50% ~ 70% RH.
12. Use components within 12 months. If 12 months or more have elapsed, check solderability before use.
13. Reflow profile recommend:

Lead-free heat endurance test



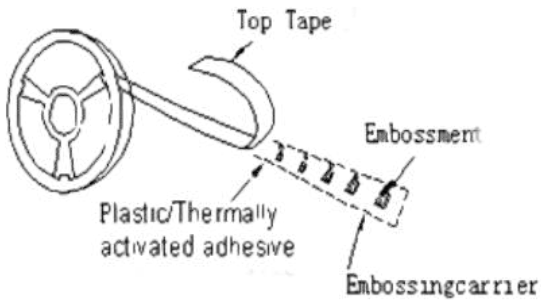
Lead-free the recommended reflow condition



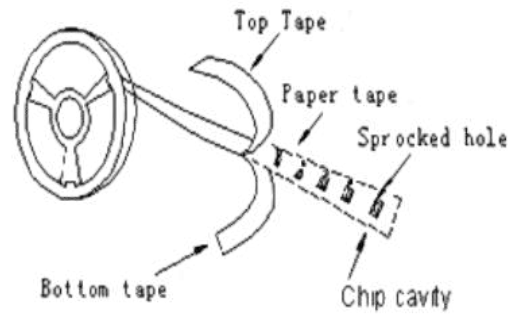
PACKAGING STYLE

• Taping Material

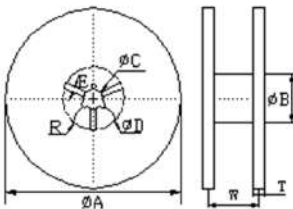
Embossing Tape



Paper Tape



• Reel Dimensions(mm)



Tape Width	A	B	C	D	E	W	T	R
8mm	178±2	60±1	13±0.5	21±0.8	2±0.5	10±1	1.5±0.5	1
12mm	178±2	60±1	13±0.5	21±0.8	2±0.5	14±1	1.5±0.5	1

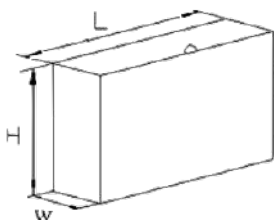
STORAGE

• Quantity

Type	PCS/REEL	PCS/INNERBOX	PCS/OUTERBOX
252012	4000	20000	100000
3015	2000	10000	50000
4020	2000	6000	12000
6045	1500	4500	9000
8040	1000	3000	6000

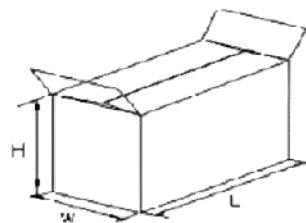
• Packing Dimensions(mm)

Inner Box Dimensions



L	W	H	THICK
180±3	70±3	190±3	2±0.8

Outer Box Dimensions



L	W	H	THICK
370±3	200±3	210±3	2±0.8

• Storage

Please be sure to the parts at 40°C, or less, 70%RH or less, and isolate the parts from sulphic and chloric atmosphere.

