

FEATURES

- RoHS compliant
- Highly accurate dimensions
- Terminals are highly resistant to external forces
- Highly reliable in environments of sudden temperature change and humidity
- Superior EMI characteristics with ultra low radiation comparing to conventional shielded power inductors
- Operate temperature range -40℃ ~ +125℃ (Including self temp. rise)



APPLICATIONS

- LCD TV
- Monitor
- Ap router
- STB and smart phone
- Touch panel
- DSC
- Game console and other electronic devices

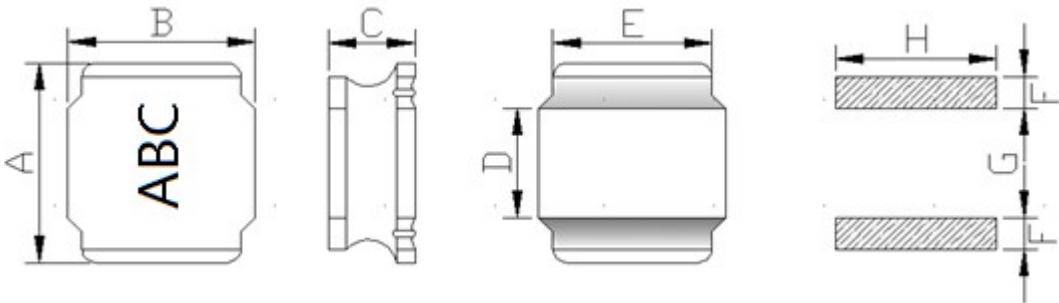
PRODUCT IDENTIFICATION

NR 8065 S 2R2 M T

① ② ③ ④ ⑤ ⑥

- ① Series NameWire Wound SMD Power Inductors
- ② Size Code: L*W*T
- ③ Feature Type:Standard
- ④ Initial inductance value: 2R2 = 2.2uH
- ⑤ Inductance Tolerance:M±20%
- ⑥ Packing: Tape & Reel

Dimensions: [mm]



A	8.00±0.3
B	8.00±0.3
C	6.5Max.
D	5.6Ref
E	6.3Ref
F	2.5Ref
G	3.4Ref
H	7.5Ref

Electrical Characteristics List

Part NO.	Tolerance(uH)	Test Freq. (kHz/v)	DCR Max (Ω)	Isat (A)Max	Irms (A)Max
NR8065S1R0NT	1.0	100/1	0.015	10.0	6.00
NR8065S2R2NT	2.2	100/1	0.018	10.0	5.50
NR8065S3R3MT	3.3	100/1	0.022	10.0	5.10
NR8065S4R7MT	4.7	100/1	0.025	9.00	4.70
NR8065S5R6MT	5.6	100/1	0.027	8.30	4.60
NR8065S6R8MT	6.8	100/1	0.029	7.50	4.50
NR8065S7R8MT	7.8	100/1	0.033	7.00	4.10
NR8065S8R2MT	8.2	100/1	0.039	6.50	3.80
NR8065S100MT	10	100/1	0.047	6.00	3.60
NR8065S150MT	15	100/1	0.064	5.00	3.50
NR8065S220MT	22	100/1	0.082	4.00	3.20
NR8065S330MT	33	100/1	0.110	3.40	2.50
NR8065S470MT	47	100/1	0.163	2.80	2.30
NR8065S560MT	56	100/1	0.195	2.60	1.90
NR8065S680MT	68	100/1	0.234	2.25	1.55
NR8065S820MT	82	100/1	0.260	2.10	1.45
NR8065S101MT	100	100/1	0.338	1.90	1.40
NR8065S151MT	150	100/1	0.533	1.50	1.05
NR8065S221MT	220	100/1	0.715	1.25	0.60
NR8065S241MT	240	100/1	0.741	1.20	0.58
NR8065S331MT	330	100/1	1.08	1.10	0.56
NR8065S471MT	470	100/1	1.56	0.87	0.54
NR8065S681MT	680	100/1	2.21	0.75	0.50
NR8065S102MT	1000	100/1	3.25	0.62	0.40
NR8065S152MT	1500	100/1	4.68	0.50	0.38
NR8065S202MT	2000	100/1	6.37	0.40	0.34
NR8065S222MT	2200	100/1	6.63	0.38	0.31
NR8065S332MT	3300	100/1	10.8	0.30	0.22
NR8065S472MT	4700	100/1	15.34	0.27	0.20
NR8065S682MT	6800	100/1	23.40	0.21	0.15
NR8065S103MT	10000	100/1	36.40	0.17	0.11

※1: All test data is referenced to 20°C ambient;

※2: Rated current: Isat or Irms, whichever is smaller;

※*3: Isat: DC current at which the inductance drops approximate 30% from its value without current;

※*4: Irms: DC current that causes the temperature rise ($\Delta T = 40^\circ\text{C}$) from 20°C ambient.

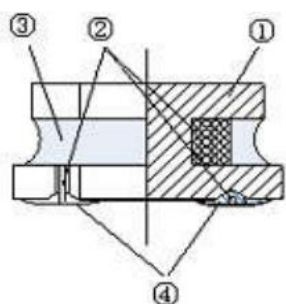
Reliability Test

TEST ITEM	SPECIFICATION	TEST CONDITION
Withstanding voltage test	After test, inductors shall have no evidence of electrical and mechanical damage.	AC voltage of 100v and AC current of 1mA applied between inductor's terminal and core for 3 secs.
Resistance to soldering heat	1. Inductor shall have no evidence of electrical and mechanical damage. 2. Inductance shall not change more than $\pm 5\%$. 3. Q shall not change more than 20%.	a. Temp: 260 ± 5 b. Time: 10 ± 1.0 se
Solderability test	The terminal shall be at least 95% covered with solder.	After fluxing, the terminal shall be dipped in a melted solder bath at $245 \pm 5^\circ\text{C}$ for 4 ± 1.0 secs.
High temperature & high humidity test	The anti-erosion quality of the surface and the specimen's inductance shall not change from the initial value within $\pm 10\%$	a. Test condition 1) Temp.: 85°C , R.H.: 85% 2) Time: 144 ± 2 hours b. Measurement method The experimental component should be put at normal condition for 2 hours then to measure again after test
Salt spray test		a. Test condition 1) Temp.: $35 \pm 2^\circ\text{C}$ 2) Time: 48 ± 2 hours 3) Salt solution PH: 6.5~7.2 b. Measurement method The experimental component should be put at normal condition for 2 hours then to measure again after test
Vibration test	1. Inductance shall be within 10% of the initial value. 2. Appearance: no damage	a. Frequency: 10 to 55 b. Amplitude: 1.5 c. Direction and time X, Y and Z directions for 2 hours each.

TEST ITEM	SPECIFICATION	TEST CONDITION
Free fall test	No mechanical damage shall be noticed.	Drop 5 times on a concrete floor from 1m the height
Temperature Cycling test	1. Inductance shall be within 10% of the initial value 2. Appearance: No damage	a. Test condition 1) Temp.: -55°C , time: $30 \pm 3\text{min}$ 2) Temp.: $+125^{\circ}\text{C}$, time: $30 \pm 3\text{min}$ 3) Cycles times: 12 cycles b. Measurement method The experimental component should be put at normal condition for 2 hours then to measure again after test
High Temperature resistance test		a. Test condition 1) Applied rated current 2) Temp.: $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 3) Test time: $1000 \pm 24/-0\text{H}$ b. Measurement method The experimental component should be put at normal condition for 24 hours then to measure again after test.
Low temperature resistance test		a. Test condition 1) Temp.: $-55^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 2) Test time: $1000 \pm 24/-0\text{H}$ b. Measurement method The experimental component should be put at normal condition for 24 hours then to measure again after test.

We have suggested the storage period of lead-free product should not over 6 months.

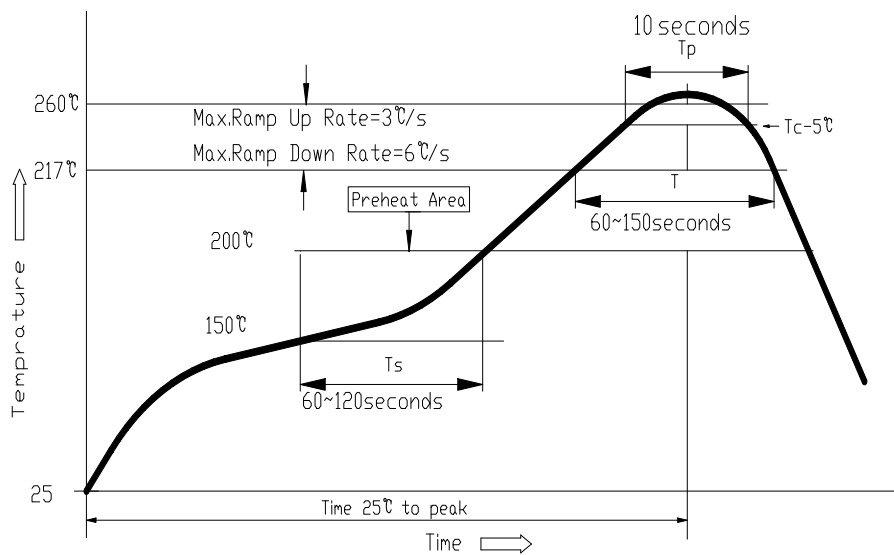
Structure (The structure of product.)



NO	Components	Material
①	Core	Ni-Zn Ferrite
②	Wire	Polyurethane system enameled copper wire
③	Magnetic Glue	Epoxy resin and magnetic powder
④	Plating	AgNiSn or FeNiCu + Sn Alloy

SOLDERING CONDITIONS

1. Reflow Soldering Profile



2. Soldering Iron

Reworking with electric soldering iron must preheating at 150°C for 1 minute is required, and do not directly touch the core with the tip of the soldering iron. The reworking soldering conditions are as follows.

- ① Temperature of soldering iron tip: 350°C;
- ② Soldering iron power output: $\leq 30W$;
- ③ Diameter of soldering iron end: $\leq 1.0mm$;
- ④ Soldering time: $< 3 s$

