

NRSC Series
SMD Shielded Tiny Power Inductor
Size 4020



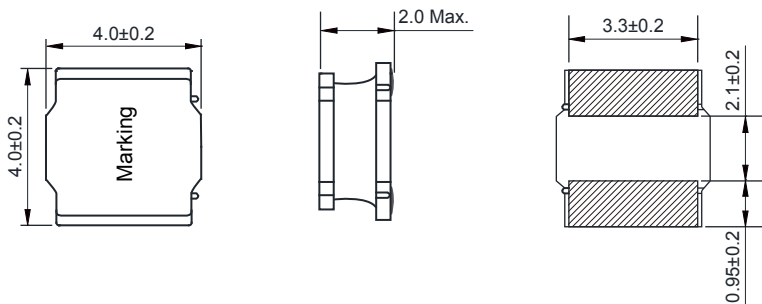
Features:

- Magnetic-resin shielded construction reduces buzz noise to ultra-low levels
- Metallization on ferrite core results in excellent shock resistance and damage-free durability
- Closed magnetic circuit design reduces leakage flux and Electro Magnetic Interference (EMI)
- 30% higher current rating than conventional inductors of equal size
- Takes up less PCB real estate and save more power
- Quantity: 3000 pcs

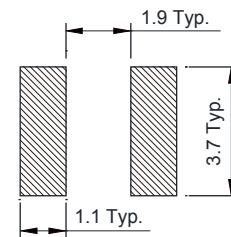
Application:

- LED Lighting
- Next-generation mobile devices with multifunction such as mobile TV and digital movie cameras
- Flat-screen TVs, blue-ray disc recorders, set top box
- Notebooks, desktop computers, servers, graphic cards cards
- Portable gaming devices, personal navigation systems, personal multimedia devices
- Automotive systems
- Telecomm base stations

Dimensions: [mm]



Land Pattern: [mm]



Electrical Properties:

| Part No | Inductance (µH) | Tolerance | Saturation current (A) | Temperature Rise Current (A) | DCR ±30% (Ω) | S.R.F Min. (MHz) |
|---------------|-----------------|-----------|------------------------|------------------------------|--------------|------------------|
| NRSC4020-1R0N | 1.0 | ±30% | 4.78 | 2.15 | 0.029 | 75 |
| NRSC4020-1R2N | 1.2 | ±30% | 5.10 | 2.15 | 0.029 | 72 |
| NRSC4020-1R5N | 1.5 | ±30% | 4.45 | 1.98 | 0.035 | 71 |
| NRSC4020-2R2N | 2.2 | ±30% | 3.40 | 1.85 | 0.040 | 49 |
| NRSC4020-3R3M | 3.3 | ±20% | 3.20 | 1.40 | 0.070 | 44 |
| NRSC4020-3R6M | 3.6 | ±20% | 2.80 | 1.54 | 0.055 | 49 |
| NRSC4020-4R7M | 4.7 | ±20% | 2.35 | 1.34 | 0.075 | 42 |
| NRSC4020-5R1M | 5.1 | ±20% | 2.30 | 1.27 | 0.085 | 42 |
| NRSC4020-5R6M | 5.6 | ±20% | 2.20 | 1.22 | 0.090 | 30 |
| NRSC4020-6R2M | 6.2 | ±20% | 2.15 | 1.08 | 0.115 | 36 |
| NRSC4020-6R8M | 6.8 | ±20% | 2.20 | 1.04 | 0.125 | 33 |
| NRSC4020-7R5M | 7.5 | ±20% | 1.85 | 1.08 | 0.115 | 30 |
| NRSC4020-8R2M | 8.2 | ±20% | 1.75 | 1.04 | 0.125 | 27 |

| Part No | Inductance (μH) | Tolerance | Saturation current (A) | Temperature Rise Current (A) | DCR ±30% (Ω) | S.R.F Min. (MHz) |
|---------------|-----------------|-----------|------------------------|------------------------------|--------------|------------------|
| NRSC4020-100M | 10 | ±20% | 1.60 | 0.90 | 0.165 | 26 |
| NRSC4020-120M | 12 | ±20% | 1.50 | 0.88 | 0.175 | 26 |
| NRSC4020-150M | 15 | ±20% | 1.35 | 0.77 | 0.230 | 24 |
| NRSC4020-220M | 22 | ±20% | 1.05 | 0.62 | 0.350 | 15 |
| NRSC4020-270M | 27 | ±20% | 1.02 | 0.50 | 0.545 | 14 |
| NRSC4020-330M | 33 | ±20% | 0.85 | 0.49 | 0.550 | 11 |
| NRSC4020-390M | 39 | ±20% | 0.82 | 0.46 | 0.650 | 11 |
| NRSC4020-430M | 43 | ±20% | 0.77 | 0.45 | 0.660 | 10 |
| NRSC4020-470M | 47 | ±20% | 0.74 | 0.44 | 0.710 | 10 |
| NRSC4020-510M | 51 | ±20% | 0.70 | 0.42 | 0.750 | 10 |
| NRSC4020-560M | 56 | ±20% | 0.66 | 0.41 | 0.800 | 10 |
| NRSC4020-620M | 62 | ±20% | 0.65 | 0.39 | 0.900 | 9.6 |
| NRSC4020-680M | 68 | ±20% | 0.61 | 0.36 | 1.060 | 7.7 |
| NRSC4020-750M | 75 | ±20% | 0.70 | 0.35 | 1.160 | 7.7 |
| NRSC4020-820M | 82 | ±20% | 0.50 | 0.34 | 1.170 | 7.2 |
| NRSC4020-101M | 100 | ±20% | 0.48 | 0.31 | 1.550 | 6.3 |

Inductance tested at 100kHz, 1Vrms.

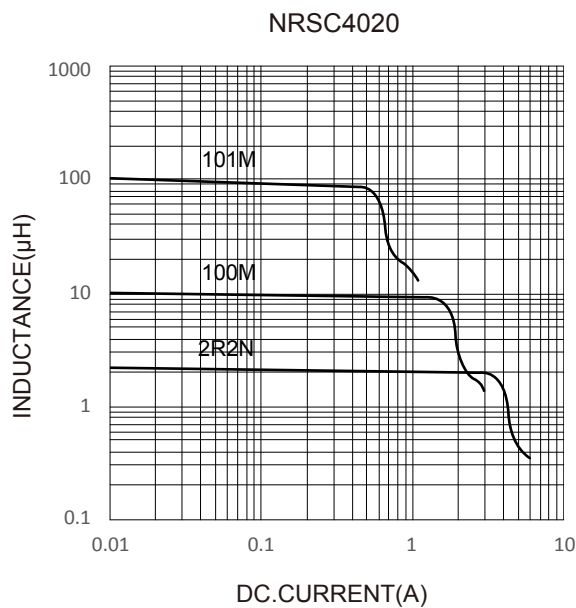
Operating temperature : -40°C ~ +125°C

Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C

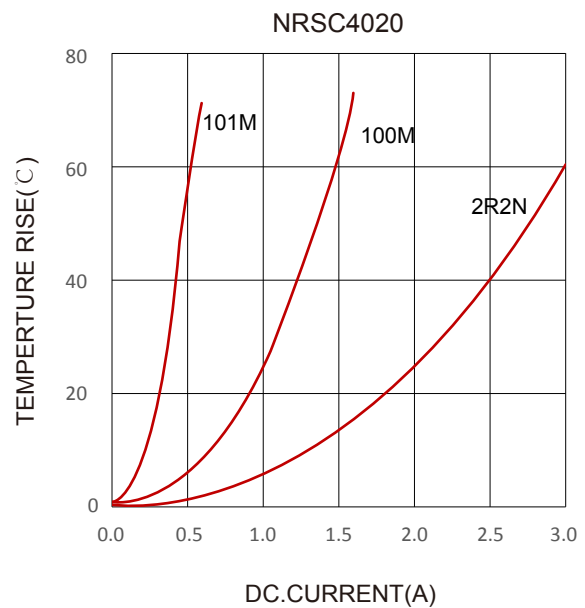
Saturation Current that will cause initial inductance to drop approximately 30%

Typical Electrical Characteristics:

Inductance VS. DC.Current Characteristics:



Temperture Rise VS. DC.Current Characteristics:



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