

**NRSE Series**  
**SMD Shielded Tiny Power Inductor**  
**Size 8040**



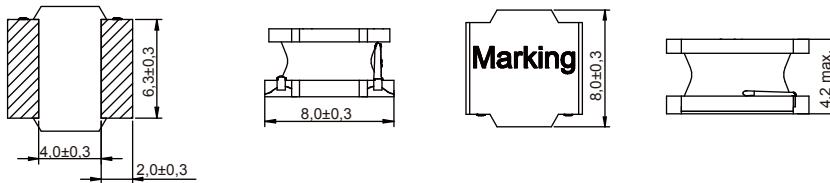
**CHARACTERISTICS**

- Magnetic resin for higher current and semi-magnetically shielded
- Different sizes from 2mm to 8mm in square shape
- Quantity: 1000pcs

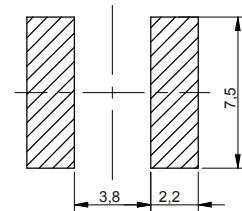
**APPLICATION**

- DC/DC converter
- LC filter

**Dimensions: [mm]**



**Land Pattern: [mm]**



**Electrical Properties:**

| Part No       | Inductance (µH) | Tolerance | Saturation current (A) | Temperature Rise Current (A) | DCR ±30% (mΩ) |
|---------------|-----------------|-----------|------------------------|------------------------------|---------------|
| NRSE8040-R56N | 0.56            | ±30%      | 11.5                   | 7.6                          | 5             |
| NRSE8040-1R0N | 1.0             | ±30%      | 9.85                   | 6.3                          | 8             |
| NRSE8040-1R5N | 1.5             | ±30%      | 8.15                   | 5.65                         | 10            |
| NRSE8040-2R2N | 2.2             | ±30%      | 7.1                    | 5.15                         | 12            |
| NRSE8040-3R3N | 3.3             | ±30%      | 6.5                    | 4.4                          | 17            |
| NRSE8040-4R7N | 4.7             | ±30%      | 5.9                    | 4.0                          | 20            |
| NRSE8040-5R6N | 5.6             | ±30%      | 5.5                    | 3.8                          | 24            |
| NRSE8040-6R8M | 6.8             | ±20%      | 4.55                   | 3.6                          | 28            |
| NRSE8040-8R2M | 8.2             | ±20%      | 4.2                    | 3.4                          | 35            |
| NRSE8040-100M | 10              | ±20%      | 3.6                    | 3.1                          | 37            |
| NRSE8040-120M | 12              | ±20%      | 3.3                    | 2.8                          | 45            |
| NRSE8040-150M | 15              | ±20%      | 2.95                   | 2.5                          | 56            |
| NRSE8040-180M | 18              | ±20%      | 2.7                    | 2.4                          | 58            |
| NRSE8040-220M | 22              | ±20%      | 2.4                    | 2                            | 74            |
| NRSE8040-270M | 27              | ±20%      | 2.15                   | 1.9                          | 80            |
| NRSE8040-330M | 33              | ±20%      | 2.05                   | 1.7                          | 100           |
| NRSE8040-470M | 47              | ±20%      | 1.75                   | 1.5                          | 158           |
| NRSE8040-560M | 56              | ±20%      | 1.55                   | 1.4                          | 160           |

| Part No       | Inductance (μH) | Tolerance | Saturation current (A) | Temperature Rise Current (A) | DCR ±30% (mΩ) |
|---------------|-----------------|-----------|------------------------|------------------------------|---------------|
| NRSE8040-680M | 68              | ±20%      | 1.45                   | 1.2                          | 196           |
| NRSE8040-820M | 82              | ±20%      | 1.3                    | 1.1                          | 245           |
| NRSE8040-101M | 100             | ±20%      | 1.15                   | 1.0                          | 295           |
| NRSE8040-121M | 120             | ±20%      | 1.0                    | 0.9                          | 380           |
| NRSE8040-151M | 150             | ±20%      | 1.1                    | 0.8                          | 470           |
| NRSE8040-171M | 170             | ±20%      | 0.95                   | 0.75                         | 538           |
| NRSE8040-181M | 180             | ±20%      | 0.9                    | 0.75                         | 610           |
| NRSE8040-221M | 220             | ±20%      | 0.85                   | 0.7                          | 660           |
| NRSE8040-331M | 330             | ±20%      | 0.68                   | 0.55                         | 970           |
| NRSE8040-471M | 470             | ±20%      | 0.6                    | 0.48                         | 1400          |
| NRSE8040-681M | 680             | ±20%      | 0.5                    | 0.45                         | 1750          |

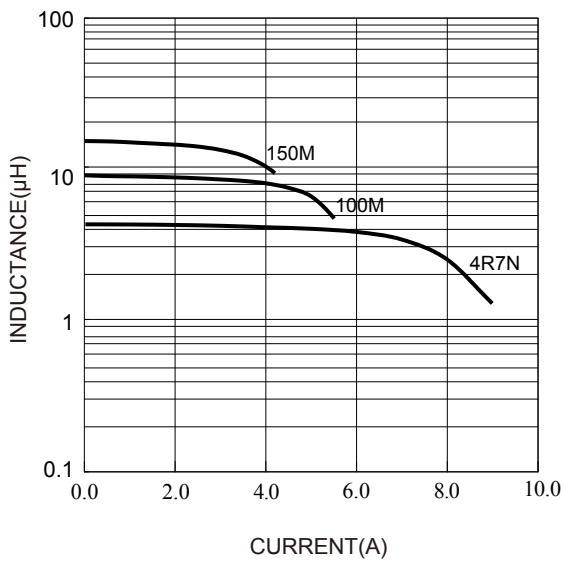
Operating temperature : -40 °C ~ +125 °C

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

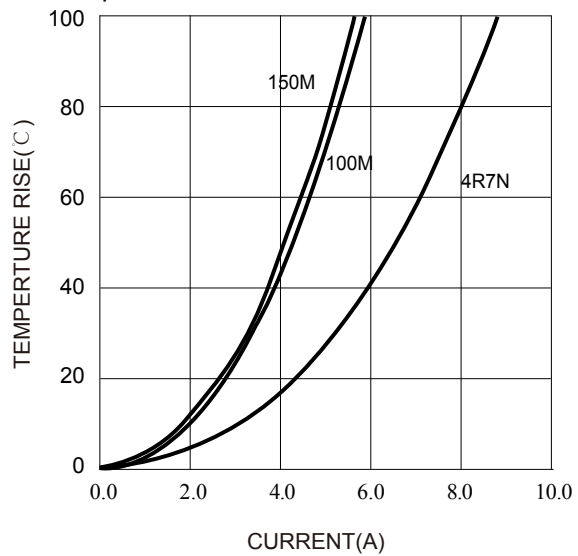
Saturation Current that will cause initial inductance to drop approximately 30%

### Typical Electrical Characteristics:

Inductance VS. Current Characteristics:



Temperature Rise VS. Current Characteristics:



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