

**NRSM Series**  
Wire Wound SMD Power Inductor  
Size 3012



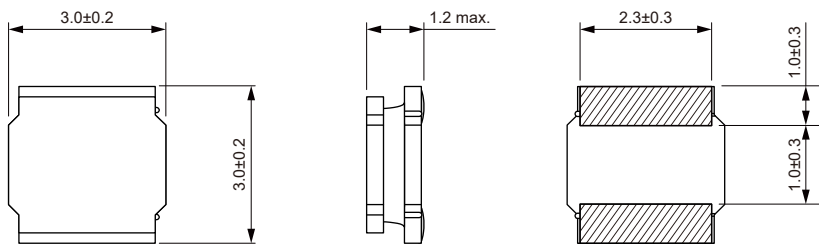
**FEATUERS**

- Magnetic resin for higher current and semi-magnetically shielded
- Operating temperature: -40 to +125 °C (including self-temperature rise)
- Quantity: 2000pcs

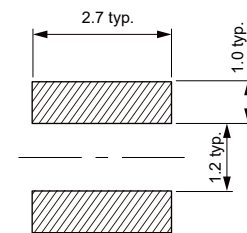
**APPLICATION**

- DC/DC converter
- LC filter

Dimensions: [mm]



Land Pattern: [mm]



Electrical Properties:

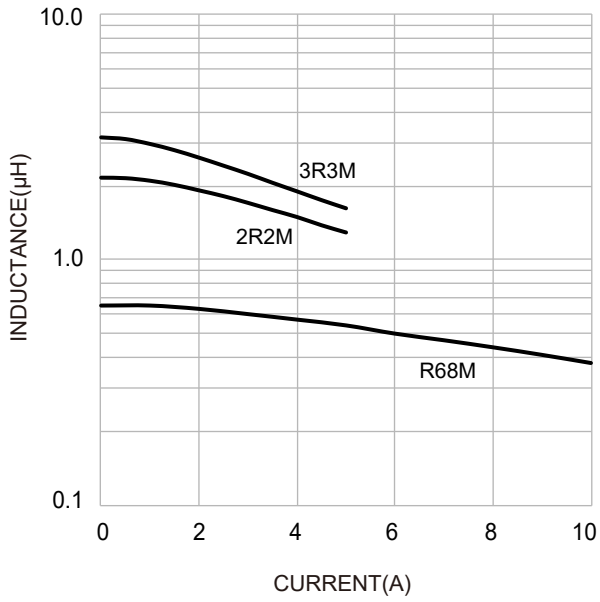
| Part No        | Inductance @ 1MHz/1V (μH) | Tolerance | Temperature Rise Current Typ. (A) | Temperature Rise Current Max. (A) | Saturation Current Typ. (A) | Saturation Current Max. (A) | DC Resistance Typ. (Ω) | DC Resistance Max. (Ω) |
|----------------|---------------------------|-----------|-----------------------------------|-----------------------------------|-----------------------------|-----------------------------|------------------------|------------------------|
| NRSM3012S-R22M | 0.22                      | ±20%      | 4.80                              | 4.20                              | 10.0                        | 9.30                        | 0.020                  | 0.026                  |
| NRSM3012S-R33M | 0.33                      | ±20%      | 4.80                              | 4.10                              | 8.90                        | 7.20                        | 0.024                  | 0.032                  |
| NRSM3012S-R47M | 0.47                      | ±20%      | 4.20                              | 3.80                              | 8.00                        | 6.80                        | 0.031                  | 0.040                  |
| NRSM3012S-R68M | 0.68                      | ±20%      | 3.60                              | 3.10                              | 6.80                        | 5.80                        | 0.038                  | 0.046                  |
| NRSM3012S-1R0M | 1.00                      | ±20%      | 3.10                              | 2.70                              | 5.40                        | 4.20                        | 0.046                  | 0.054                  |
| NRSM3012S-1R5M | 1.50                      | ±20%      | 2.90                              | 2.50                              | 4.10                        | 3.40                        | 0.062                  | 0.074                  |
| NRSM3012S-2R2M | 2.20                      | ±20%      | 2.35                              | 2.05                              | 3.35                        | 2.80                        | 0.090                  | 0.108                  |
| NRSM3012S-3R3M | 3.30                      | ±20%      | 1.80                              | 1.50                              | 2.60                        | 2.20                        | 0.144                  | 0.185                  |
| NRSM3012S-4R7M | 4.70                      | ±20%      | 1.35                              | 1.15                              | 2.50                        | 2.00                        | 0.215                  | 0.255                  |
| NRSM3012S-6R8M | 6.80                      | ±20%      | 1.25                              | 1.10                              | 1.90                        | 1.60                        | 0.290                  | 0.340                  |
| NRSM3012S-100M | 10.0                      | ±20%      | 1.15                              | 1.00                              | 1.45                        | 1.20                        | 0.395                  | 0.474                  |
| NRSM3012S-150M | 15.0                      | ±20%      | 0.60                              | 0.53                              | 1.30                        | 1.10                        | 0.610                  | 0.740                  |
| NRSM3012S-220M | 22.0                      | ±20%      | 0.46                              | 0.40                              | 1.15                        | 0.96                        | 0.960                  | 1.200                  |

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

Temperature Rise Current: For max value, ΔT < 40 °C ; For Typ value, ΔT is approximate 40 °C .

Typical Electrical Characteristics:

Inductance VS. Current Characteristics:



Temperature Rise VS. Current Characteristics:

