



### Description

- Low profile construction and miniature size.
- Magnetic shielded construction.
- High current saturation.
- Operating temperature: -40°C ~ +125°C.
- RoHS compliant



### Applications

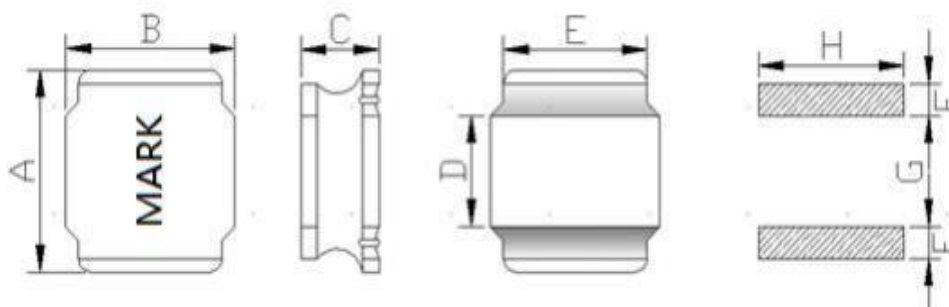
- For small DC/DC converter(HDD,DVC,DSC,PDA,LCD display etc.).
- Car navigation systems,telecom base stations.
- VR,AR,LED lighting.

### Product Identification

|            |              |            |          |          |
|------------|--------------|------------|----------|----------|
| <u>GNR</u> | <u>8040S</u> | <u>xxx</u> | <u>M</u> | <u>I</u> |
| ①          | ②            | ③          | ④        |          |

- ① Series name
- ② Dimensions
- ③ Inductance Value
- ④ Inductance Tolerance ( M=  $\pm 20\%$ ; N=  $\pm 30\%$  )

Dimensions-mm



| Series   | A       | B       | C       | D       | E      | F       | G       | I       |
|----------|---------|---------|---------|---------|--------|---------|---------|---------|
| GNR8040S | 8.0±0.3 | 8.0±0.3 | 4.2 Max | 3.5±0.3 | 6.3Ref | 2.5 Ref | 3.4 Ref | 7.5 Ref |

Electrical Characteristics

| Part Number     | Inductance   | DC Resistance |       | Saturation Current | Heating Rating Current |
|-----------------|--------------|---------------|-------|--------------------|------------------------|
|                 | L (μH)       | DCR(mΩ)       |       | A                  | A                      |
|                 | 100kHz,0.25V | Typ           | Max   | Typ                | Typ                    |
| GNR8040S-1R0-NT | 1.00±30%     | 8.0           | 11.0  | 9.85               | 6.30                   |
| GNR8040S-1R5-NT | 1.50±30%     | 10.0          | 14.0  | 8.15               | 5.65                   |
| GNR8040S-2R2-NT | 2.20±30%     | 12.0          | 16.0  | 7.10               | 5.15                   |
| GNR8040S-3R3-MT | 3.30±20%     | 20.0          | 24.0  | 6.50               | 4.40                   |
| GNR8040S-4R7-MT | 4.70±20%     | 24.0          | 28.0  | 5.90               | 4.00                   |
| GNR8040S-6R8-MT | 6.80±20%     | 28.0          | 32.0  | 4.55               | 3.60                   |
| GNR8040S-100-MT | 10.0±20%     | 40.0          | 48.0  | 3.60               | 3.10                   |
| GNR8040S-101-MT | 100.0±20%    | 300.0         | 390.0 | 1.15               | 1.00                   |
| GNR8040S-150-MT | 15.0±20%     | 70.0          | 79.0  | 2.95               | 2.50                   |
| GNR8040S-220-MT | 22.0±20%     | 86.0          | 90.0  | 2.40               | 2.00                   |
| GNR8040S-330-MT | 33.0±20%     | 100.0         | 126.0 | 2.05               | 1.70                   |
| GNR8040S-470-MT | 47.0±20%     | 120.0         | 177.0 | 1.75               | 1.50                   |
| GNR8040S-680-MT | 68.0±20%     | 200.0         | 255.0 | 1.45               | 1.20                   |

Notes:

1. All test data is referenced to 25 °C ambient
2. Operating temperature range - 40°C to + 125 °C
3. Id<sub>c</sub>(A):DC current (A) that will cause an approximate ΔT of 40 °C
4. Isat(A):DC current (A) that will cause L<sub>0</sub> to drop approximately 30 %
5. The part temperature (ambient + temp rise) should not exceed 125 °C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.