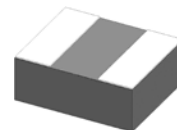


## 1. Features of SMF252010A series:

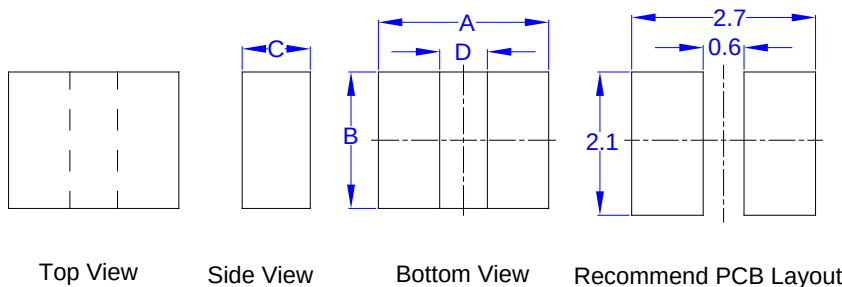
- 1008 Foot print (2.5 x 2.0 mm).
- Inductance range from 0.10 uH to 4.70 uH.
- High saturation current characteristics by distributed gapped metal dust core.
- Ideal for portable device, PAD, Notebook, smart phone & High Density DC to DC converter Board.
- Lower DC resistance for higher current application.
- Working Frequency up to 5MHz.
- T & R Qtys: 3000 pcs , 7" Reel and Plastic tape: 8mm wide, 4mm pocket spacing.
- Operating Temperature Range: -55°C to + 125°C (ambient + self-temperature rise).
- RoHS and HF compliant.



## 2. Electrical Characteristics of SMF252010A series:

| ITG Part Number   | Inductance<br>(uH)<br>± 20% | DCR<br>(mΩ)<br>Typ. | DCR <sup>2</sup><br>(mΩ)<br>Max. | Isat <sup>3</sup><br>(A)<br>Typ. | Irms <sup>4</sup><br>(A)<br>Typ. |
|-------------------|-----------------------------|---------------------|----------------------------------|----------------------------------|----------------------------------|
| SMF252010A-R10MHF | 0.10                        | 5.80                | 7.00                             | 9.00                             | 8.50                             |
| SMF252010A-R47MHF | 0.47                        | 15.50               | 18.00                            | 6.00                             | 5.50                             |
| SMF252010A-1R0MHF | 1.00                        | 22.50               | 26.00                            | 5.00                             | 4.50                             |
| SMF252010A-2R2MHF | 2.20                        | 60.00               | 70.00                            | 3.20                             | 2.50                             |
| SMF252010A-3R3MHF | 3.30                        | 90.00               | 100.00                           | 2.50                             | 2.10                             |
| SMF252010A-4R7MHF | 4.70                        | 145.00              | 160.00                           | 2.10                             | 1.80                             |

## 3. Mechanical Dimensions of SMF252010A series (unit: mm):



| Type       | A           | B           | C         | D         |
|------------|-------------|-------------|-----------|-----------|
| SMF252010A | 2.50 ± 0.20 | 2.00 ± 0.20 | 1.00 Max. | 0.70 Typ. |

### Notes:

1. Test conditions: 1MHz, 1.0V, 25°C ambient temperature .
2. DCR @ 25°C. (DCR test position at bottom Pad surface).
3. Isat: DC current that causes inductance to drop approximately 30%(Typ.) from OCL (Ta=25°C).
4. Irms: DC current for an approximate temperature rise of 40°C without core loss. Derating is necessary for AC currents. PCB pad layout, trace thickness and width, air-flow and proximity of other heat generating components will affect the temperature rise. It is recommended the part temperature not exceed 125° C under worst case operating conditions as verified in the end application.
5. Maximum Operating Voltage: 24Vdc.
6. Storage temperature range: 20°C ~ 35°C , 75%RH (Max.).

## 4. Inductance vs. Current vs. Temperature Rise Characteristics of SMF252010A Series :

