



# CSMS0412D Series SMD WIRE WOUND POWER INDUCTORS (SHIELDED)

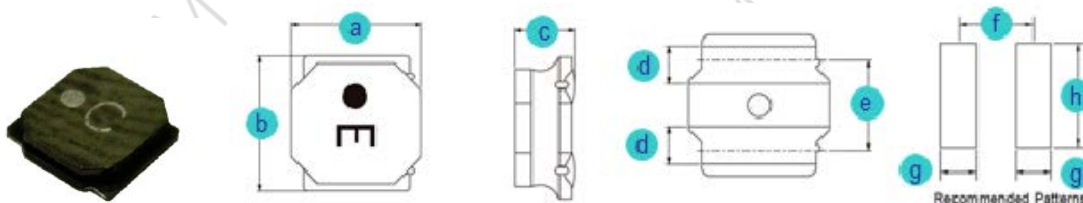
Rev. A

## A. Electrical Specifications:

| P/N            | Marking | Inductance<br>@100KHz (μH) | Inductance<br>Tolerance | DCR<br>±20%(Ω) | Rated Current (mA) |       | SRF Min.<br>(MHz) |
|----------------|---------|----------------------------|-------------------------|----------------|--------------------|-------|-------------------|
|                |         |                            |                         |                | I sat              | I rms |                   |
| CSMS0412D-1R0N | A       | 1.0                        | ± 30%                   | 0.042          | 2800               | 2200  | 100               |
| CSMS0412D-2R2M | C       | 2.2                        | ± 20%                   | 0.060          | 1650               | 1900  | 70                |
| CSMS0412D-3R3M | E       | 3.3                        | ± 20%                   | 0.070          | 1400               | 1700  | 60                |
| CSMS0412D-4R7M | H       | 4.7                        | ± 20%                   | 0.095          | 1200               | 1500  | 45                |
| CSMS0412D-6R8M | I       | 6.8                        | ± 20%                   | 0.125          | 900                | 1300  | 35                |
| CSMS0412D-100M | K       | 10                         | ± 20%                   | 0.170          | 800                | 1100  | 30                |
| CSMS0412D-150M | M       | 15                         | ± 20%                   | 0.260          | 650                | 750   | 24                |
| CSMS0412D-220M | N       | 22                         | ± 20%                   | 0.400          | 500                | 620   | 18                |

## B. Dimensions: mm (Inch)

| Series    | a               | b               | c              | d               | e               | f              | g              | h              |
|-----------|-----------------|-----------------|----------------|-----------------|-----------------|----------------|----------------|----------------|
| CSMS0412D | 4.0<br>(0.157)  | 4.0<br>(0.157)  | 1.2<br>(0.047) | 1.1<br>(0.043)  | 2.5<br>(0.098)  | 2.8<br>(0.110) | 1.2<br>(0.047) | 3.7<br>(0.146) |
| Tol.      | ±0.2<br>(0.008) | ±0.2<br>(0.008) | Max.           | ±0.2<br>(0.008) | ±0.2<br>(0.008) | Typ.           | Typ.           | Typ.           |



## C. General Information:

1. CSMS0412D-xxx\_, "CSMS0412D" = P/N, "xxx" = Inductance, "\_" = Tolerance.
2. Tolerance "\_": M: ± 20%, N: ± 30%
3. Magnetically shielded
4. High saturation current
5. Storage temperature: -40°C to +85°C.
6. Operating temperature range: -25°C to +125°C (Including self-heating).
7. Inductance measured using the HP4285A and Chroma1320 & 3302.
8. DCR measured using Chroma 16502.
9. SRF measured using the HP4291B.
10. Saturation Current Idc1: The value of current causes a 30% Inductance reduction from initial value. ( at : 20 °C ambient)
11. Temperature rise current Idc2: The value of current causes a 40°C temperature rise. ( at : 20 °C ambient)
12. Rated Current: Either Idc1 or Idc2 whichever is smaller.
13. MSL: Level 1.
14. Inductance and Current range: From 1.0 μH (2200mA) to 22.0 μH (620mA).

## D. Applications:

1. Game Consoles
2. Set Top Boxes
3. Cables Modems
4. Computers
5. Mobile Communication Devices (Cell Phones, Radios, etc.)
6. PDA, LCD, DVD, BRP, HD.



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## E. Characteristics Curve:

