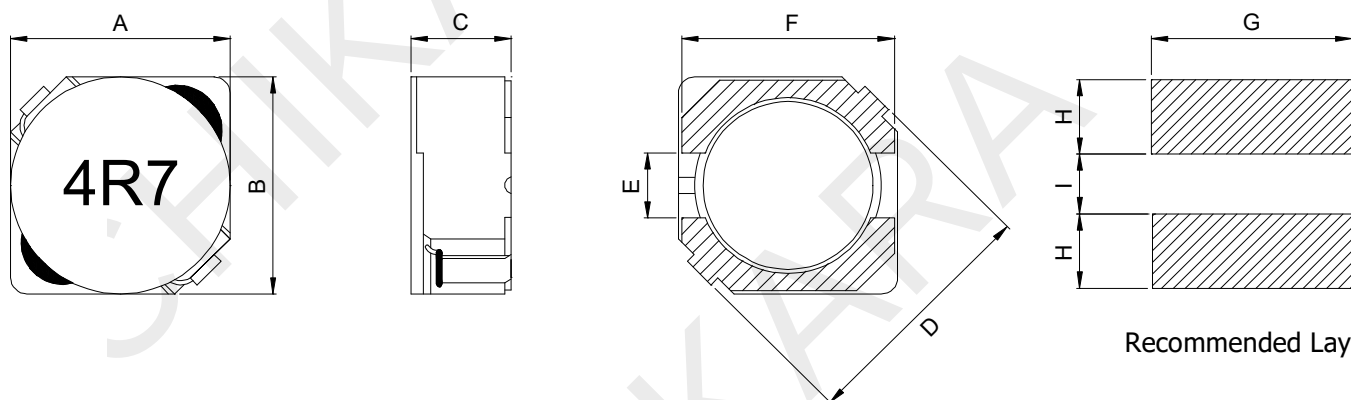


### Features

- Magnetically shielded construction
- Storage temperature range:-40°C to + 125°C
- Operating temperature range:-40°C to + 125°C  
(including coil's self-temperature rise)
- Moisture sensitivity level:1
- Packaging:1500pcs. Per 13-inch reel
- RoHs&Halogen-free compliant



### Mechanical Dimension(Unit:mm)



Recommended Layout

| A       | B       | C       | D       | E       | F       | G   | H    | I   |
|---------|---------|---------|---------|---------|---------|-----|------|-----|
| 5.7±0.5 | 5.7±0.5 | 3.1Max. | 8.2Max. | 2.0±0.3 | 5.5±0.3 | 6.3 | 2.15 | 2.0 |

### Part Number Description

SP18 - 0603 4R7 M  
① ② ③ ④

|   |                  |
|---|------------------|
| ① | Type             |
| ② | Dimensions       |
| ③ | Inductance value |
| ④ | Tolerance code   |

### Electrical Schematic



### Electrical Characteristic

| Part Number   | Inductance<br>L0(μH) | DCR<br>(mΩ)Max. | SRF<br>(MHz)Typ. | Isat<br>(A)Typ. | Irms<br>(A)Typ. |
|---------------|----------------------|-----------------|------------------|-----------------|-----------------|
| SP18-06034R7M | 4.7±20%              | 43              | 65               | 2.84            | 3.10            |
| SP18-06035R6M | 5.6±20%              | 48              | 60               | 2.74            | 2.95            |
| SP18-06036R8M | 6.8±20%              | 52              | 47               | 2.30            | 2.80            |
| SP18-06038R2M | 8.2±20%              | 55              | 45               | 2.22            | 2.65            |
| SP18-0603100M | 10±20%               | 70              | 39               | 1.84            | 2.50            |
| SP18-0603120M | 12±20%               | 79              | 33               | 1.70            | 2.35            |
| SP18-0603150M | 15±20%               | 106             | 27               | 1.56            | 2.20            |
| SP18-0603180M | 18±20%               | 118             | 24               | 1.36            | 2.05            |
| SP18-0603220M | 22±20%               | 158             | 21               | 1.22            | 1.90            |
| SP18-0603270M | 27±20%               | 180             | 19               | 1.18            | 1.75            |
| SP18-0603330M | 33±20%               | 250             | 18               | 1.10            | 1.60            |
| SP18-0603390M | 39±20%               | 275             | 17               | 0.99            | 1.45            |
| SP18-0603470M | 47±20%               | 300             | 16               | 0.93            | 1.30            |
| SP18-0603560M | 56±20%               | 380             | 14               | 0.79            | 1.15            |
| SP18-0603680M | 68±20%               | 410             | 12               | 0.69            | 1.00            |
| SP18-0603820M | 82±20%               | 510             | 10               | 0.67            | 0.85            |
| SP18-0603101M | 100±20%              | 660             | 9                | 0.59            | 0.69            |

- Test frequency and voltage:100KHz,0.1Vrms.
- All test data referenced to 25°C ambient.
- Saturation current(Isat) will cause L0 to drop approximately 30%.
- Heat rated current(Irms) will cause the coil temperature rise approximately Δt of 40°C.



### Soldering Specification

- Reflow profile for SMT components



- Classification of peak package body temperature (Tp)

|                  | Package Thickness | Package Volume      |                         |                      |
|------------------|-------------------|---------------------|-------------------------|----------------------|
|                  |                   | <350mm <sup>3</sup> | 350~2000mm <sup>3</sup> | >2000mm <sup>3</sup> |
| PB-Free Assembly | <1.6mm            | 260°C               | 260°C                   | 260°C                |
|                  | 1.6~2.5mm         | 260°C               | 250°C                   | 245°C                |
|                  | ≥2.5mm            | 250°C               | 245°C                   | 245°C                |

※ Reflow is referred to standard IPC/JEDEC J-STD-020D.