

SMD Power Inductor

Fixed Inductor for Surface Mounting

SPE5020 Series

Construction

- SMD Magnetic-resin shielded type



Features

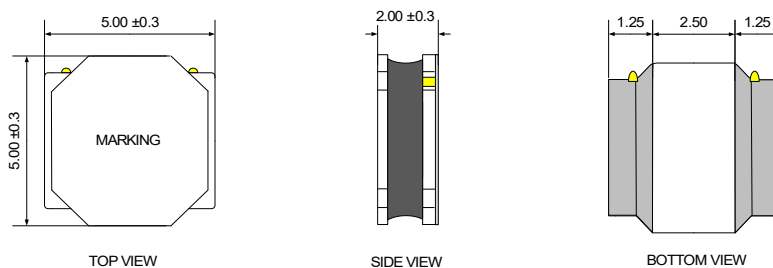
- Qualified to AEC-Q200
- Operating temperature -50 ~ +155°C (Including self temperature)
- Solder reflow temperature 260°C peak
- Suitable for lead-free reflow soldering
- Available on tape and reel for automatic insertion



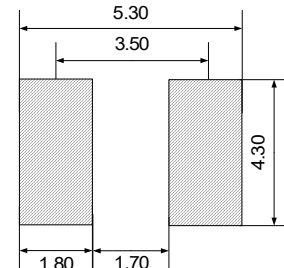
Applications

- Automotive / PDA / Notebook systems
- DC/DC converters
- Portable gaming devices, personal navigation systems, personal multimedia devices

Dimensions (Unit:mm)



Recommended Land Pattern (Unit:mm)



Electrical Characteristics

| Ordering code | Inductance(uH) | DCR(mΩ, ±30%) | Isat*1(A, TYP) | Irms*2(A, TYP) | Marking |
|---------------|----------------|---------------|----------------|----------------|---------|
| SPE5020-R75N | 0.75±30% | 14.0 | 6.00 | 3.50 | R75 |
| SPE5020-1R2N | 1.20±30% | 18.0 | 5.20 | 3.20 | 1R2 |
| SPE5020-1R5N | 1.50±30% | 23.0 | 4.30 | 3.00 | 1R5 |
| SPE5020-2R2N | 2.20±30% | 27.0 | 3.80 | 2.85 | 2R2 |
| SPE5020-3R0N | 3.00±30% | 35.0 | 3.20 | 2.40 | 3R0 |

※Test Equipment

*Inductance : Agilent 4285A (100kHz, 1.0V)

*DCR Meter : ABM3245 (20mΩ~2MΩ)

*Bias Current : Agilent 4285A + Agilent 42841A

*Specifications subject to change without notice. Please check our website for latest information.

*Notes

*1.Isat : DC current (A) that will cause L0 to drop approximately 30%

*2.Irms : DC current (A) that will cause an approximate ΔT of 40°C

Revised 01/02/25

SMD Power Inductor

Fixed Inductor for Surface Mounting

SPE5020 Series

Electrical Characteristics

| Ordering code | Inductance(uH) | DCR(m Ω , \pm 30%) | Isat*1(A,TYP) | Irms*2(A,TYP) | Marking |
|---------------|-----------------|-----------------------------|---------------|---------------|---------|
| SPE5020-3R6N | 3.60 \pm 30% | 40.0 | 3.00 | 2.30 | 3R6 |
| SPE5020-4R7M | 4.70 \pm 20% | 45.0 | 2.60 | 1.98 | 4R7 |
| SPE5020-5R6M | 5.60 \pm 20% | 66.0 | 2.40 | 1.90 | 5R6 |
| SPE5020-6R8M | 6.80 \pm 20% | 70.0 | 2.20 | 1.80 | 6R8 |
| SPE5020-7R5M | 7.50 \pm 20% | 80.0 | 2.00 | 1.70 | 7R5 |
| SPE5020-100M | 10.0 \pm 20% | 110.0 | 1.80 | 1.44 | 100 |
| SPE5020-120M | 12.0 \pm 20% | 140.0 | 1.40 | 1.40 | 120 |
| SPE5020-150M | 15.0 \pm 20% | 160.0 | 1.30 | 1.35 | 150 |
| SPE5020-180M | 18.0 \pm 20% | 210.0 | 1.20 | 1.15 | 180 |
| SPE5020-220M | 22.0 \pm 20% | 300.0 | 1.10 | 1.00 | 220 |
| SPE5020-330M | 33.0 \pm 20% | 390.0 | 0.90 | 0.75 | 330 |
| SPE5020-470M | 47.0 \pm 20% | 630.0 | 0.80 | 0.65 | 470 |
| SPE5020-560M | 56.0 \pm 20% | 685.0 | 0.75 | 0.60 | 560 |
| SPE5020-680M | 68.0 \pm 20% | 790.0 | 0.65 | 0.55 | 680 |
| SPE5020-820M | 82.0 \pm 20% | 1.06 Ω | 0.60 | 0.52 | 820 |
| SPE5020-101M | 100.0 \pm 20% | 1.22 Ω | 0.55 | 0.50 | 101 |

*Test Equipment

*Inductance : Agilent 4285A (100kHz, 1.0V)

*DCR Meter : ABM3245 (20m Ω ~2M Ω)

*Bias Current : Agilent 4285A + Agilent 42841A

*Specifications subject to change without notice. Please check our website for latest information.

*Notes

*1.Isat : DC current (A) that will cause L0 to drop approximately 30%

*2.Irms : DC current (A) that will cause an approximate Δ T of 40°C

Revised 01/02/25