

SMD Wire-Wound Ferrite Chip Inductor For Power Line

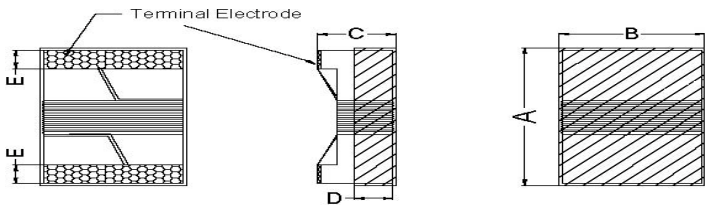
Wire wound ferrite chip inductor offers the overall combination of low cost, close tolerance, better Q factor and high self-resonant multiplayer chip inductor.

SFI P-Series

SFI2520P type

SFI2520P [1008 inch]

◆ SHAPE & DIMENSIONS



| SFI2520P | Dimensions |
|---------------|------------|
| A (mm) | 2.92 max |
| B (mm) | 2.79 max |
| C (mm) | 2.20 max |
| D (mm) | 1.20(ref) |
| E (mm) | 0.55±0.10 |

◆ PART NUMBER CONSTRUCTION

| SFI | 2520 | P | — | 1R0 | K | T |
|-------------------------|-----------------------------|----------------------|---|------------------------------------|--|--------|
| Series name | L*W*T Dimensions (mm) | P type Power Line | | Inductance (uH) at 2.52/7.96MHz | Inductance Tolerance | Taping |
| SMD Ferrite Inductor | 2.9*2.79*2.2 | | | 1R0 1R5 | B = ±0.2nH S = ±0.3nH G = ±2% J = ±5% K = ±10% M = ±20% | |
| | | | | 1R8 2R2 | | |
| | | | | 2R7 3R3 | | |
| | | | | 3R6 4R7 | | |
| | | | | 5R6 6R8 | | |
| | | | | 8R2 100 | | |
| | | | | 150 220 | | |
| | | | | 330 R27 | | |

◆ OPERATING TEMPERATURE RANGE, PACKAGE QUANTITY.

| Type | Temperature range | | Reel Dimensions (mm) | Package quantity (pieces/reel) |
|-----------------|--------------------------------|------------------------------|----------------------------|--------------------------------------|
| | Operating Temperature °C | Storage Temperature °C | | |
| SFI2520P-Series | -25 to +85 | -25 to +85 | ø180 | 2,000 |

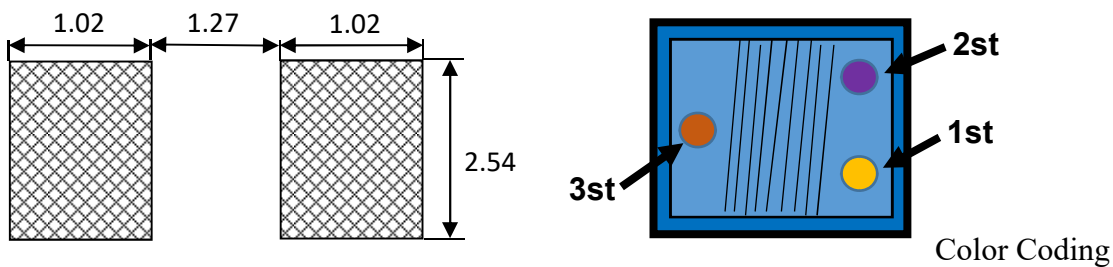
◆ ELECTRICAL CHARACTERISTICS

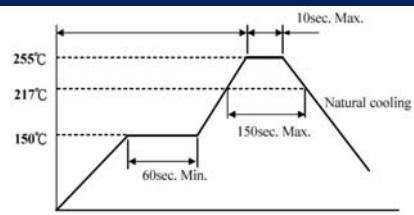
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| Inductance 7.96MHz (uH) | Inductance Tolerance | Q 7.96MHz min. | DC R (Ω) max. | IDC (mA) max. | SRF (MHz) Min. | Part No. |
|----------------------------|-------------------------|----------------------|---------------|---------------|-------------------|---------------|
| 1.0 | K,M | 12 | 0.15 | 1000 | 345 | SFI2520P-1R0□ |
| 1.5 | K,M | 12 | 0.17 | 850 | 100 | SFI2520P-1R5□ |
| 1.8 | K,M | 12 | 0.21 | 800 | 85 | SFI2520P-1R8□ |
| 2.2 | K,M | 12 | 0.21 | 775 | 78 | SFI2520P-2R2□ |
| 2.7 | K,M | 12 | 0.26 | 730 | 58 | SFI2520P-2R7□ |
| 3.3 | K,M | 12 | 0.26 | 715 | 48 | SFI2520P-3R3□ |
| 3.6 | K,M | 12 | 0.47 | 600 | 47 | SFI2520P-3R6□ |
| 4.7 | K,M | 12 | 0.52 | 505 | 46 | SFI2520P-4R7□ |
| 5.6 | K,M | 12 | 0.65 | 450 | 40 | SFI2520P-5R6□ |
| 6.8 | K,M | 12 | 0.72 | 432 | 33 | SFI2520P-6R8□ |

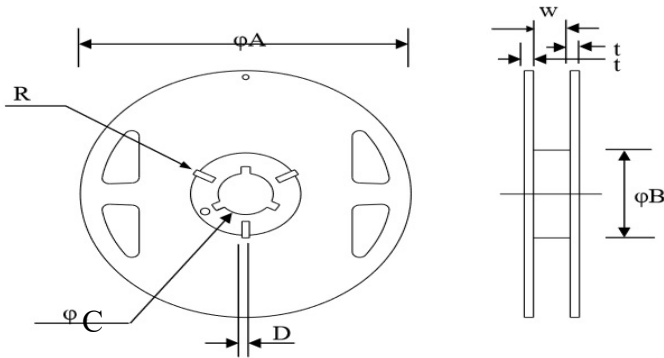
| Inductance 2.52MHz (uH) | Inductance Tolerance | Q 2.52MHz min. | DC R (Ω) max. | IDC (mA) max. | SRF (MHz) Min. | Part No. |
|----------------------------|-------------------------|----------------------|---------------|---------------|-------------------|---------------|
| 8.2 | K,M | 12 | 0.76 | 410 | 30 | SFI2520P-8R2□ |
| 10 | K,M | 12 | 1 | 392 | 28 | SFI2520P-100□ |
| 15 | K,M | 12 | 1.8 | 342 | 21 | SFI2520P-150□ |
| 22 | K,M | 12 | 1.96 | 260 | 18 | SFI2520P-220□ |
| 33 | K,M | 12 | 2.47 | 236 | 15 | SFI2520P-330□ |

◆ Recommended Soldering Conditions (Please use this product by reflow soldering)

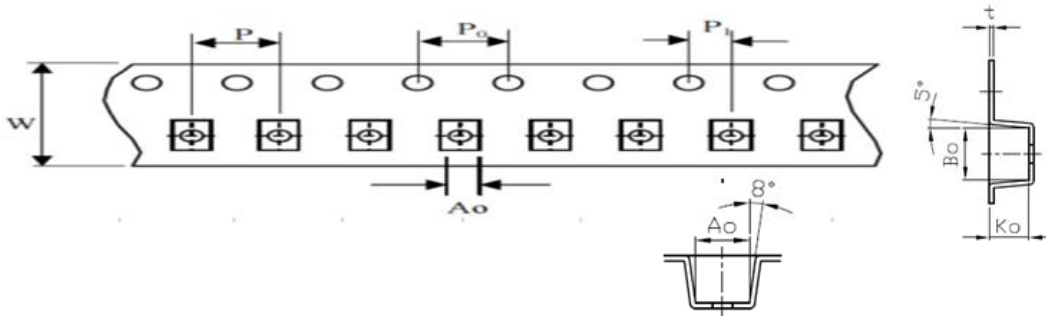


| | | | |
|--|---|--|---|
| Soldering & Mounting Recommended Reflow Pattern Reflow : until two times | |  | |
| Solder Heat Resistance | Appearance: NO significant abnormality. Inductance change: Within+/-20%. | Preheat: 150°C,60sec. Solder temperature:260+/-5°C Flux for lead :rosin Dip time:10+/-0.5sec | |
| Solder ability Test | More than 90% of the terminal electrode Should be covered with solder. | Preheat: 150°C,60sec. Solder temperature:230+/-5°C Flux for lead :rosin Dip time: 4+/-1sec | |
| Reliability Test | | | |
| High Temperature Life Test | Appearance: no damage. Inductance: within+/-20%of initial value. No disconnection or short circuit. | Temperature: 85+/-5°C. Duration:500+/-12hrs Measured at room temperature after placing for 2 to 3hrs. | |
| Low Temperature Life Test | Appearance: no damage Inductance: within+/-20%of initial value. No disconnection or short circuit. | Temperature: -40+/-5°C. Duration:500+/-12hrs Measured at room temperature after placing for 2 to 3hrs. 測試後室溫放置2-3小時，才可以測試電氣特性. | |
| Thermal shock | 階段 | 溫度°C | 時間 (分) |
| | 1 | -40+/-3°C | 30+/-3 |
| | 2 | 常溫 | Within3 |
| | 3 | +85+/-3°C | 30+/-3 |
| | 4 | 常溫 | Within3 |
| 測試性能同上 | | | Condition for 1 cycle Step1:-40+/-3°C 30+/-3 min. Step2: Room Temperature within 3min. Step3:+85+/-3°C 30+/-3min Step4: Room Temperature within 3min. Number of cycles:10 測試後室溫放置2-3小時，才可以測試電氣特性. |
| Humidity Resistance | Appearance: no damage Inductance: within+/-20%of initial value. No disconnection or short circuit. | Humidity:90-95%RH Temperature:60+/-5°C Applied current: Rated current. Duration: 500+/-12hrs. 放置時間：500+/-12hrs Measured at room temperature after placing for 2 to 3hrs. 測試後室溫放置2-3小時，才可以測試電氣特性. | |

◆ Reel Dimension & Tape Dimension



| Type | A(mm) | B(mm) | C(mm) | W(mm) |
|--------|---------|--------|----------|---------|
| 7"x8mm | 178±1.0 | 60±0.5 | 13.5±0.5 | 9.5±0.5 |



| PN | Size | W(mm) | P(mm) | Po(mm) | P1(mm) | A0(mm) | B0(mm) | K0(mm) | t(mm) |
|----------|------|-------|-------|--------|--------|----------|----------|----------|-----------|
| SF11608P | 1608 | 8±0.1 | 4±0.1 | 4±0.1 | 2±0.05 | 1.3±0.1 | 1.8±0.1 | 1.1±0.1 | 0.2±0.05 |
| SCI2012S | 2012 | 8±0.1 | 4±0.1 | 4±0.1 | 2±0.05 | 1.85±0.1 | 2.5±0.1 | 1.7±0.1 | 0.23±0.05 |
| SF12012P | 2012 | 8±0.1 | 4±0.1 | 4±0.1 | 2±0.05 | 1.6±0.1 | 2.5±0.1 | 1.25±0.1 | 0.22±0.05 |
| SF12012S | 2012 | 8±0.1 | 4±0.1 | 4±0.1 | 2±0.05 | 1.6±0.1 | 2.5±0.1 | 1.25±0.1 | 0.22±0.05 |
| SF12520P | 2520 | 8±0.1 | 4±0.1 | 4±0.1 | 2±0.05 | 2.61±0.1 | 2.93±0.1 | 2.25±0.1 | 0.26±0.05 |
| SCI2520S | 2520 | 8±0.1 | 4±0.1 | 4±0.1 | 2±0.05 | 2.61±0.1 | 2.93±0.1 | 2.25±0.1 | 0.26±0.05 |
| SCI1608S | 1608 | 8±0.1 | 4±0.1 | 4±0.1 | 2±0.05 | 1.15±0.1 | 1.83±0.1 | 0.95±0.1 | 0.22±0.05 |

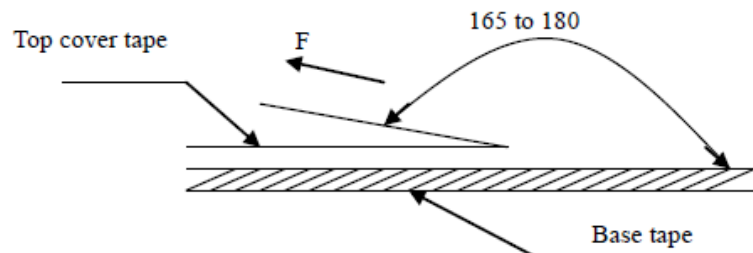
The force for tearing off cover tape is 15 to 60 grams in the arrow direction at the following conditions:

Temperature : 5 ~ 35°C

Humidity : 45 ~ 85%

Atmospheric pressure : 860 ~ 1060 hpa

Tearing Speed: 300Mm/min



◆ Packaging Quantity

| Chip Size | 1608 | 2012 | 2520 |
|------------|----------|-------|------|
| 8mm / Reel | 2K/3K/4K | 2K/3K | 2K |