



SMD Coupled Inductors-SP/ST Series

SP/ST series For 1:1 Isolation transformers

Features

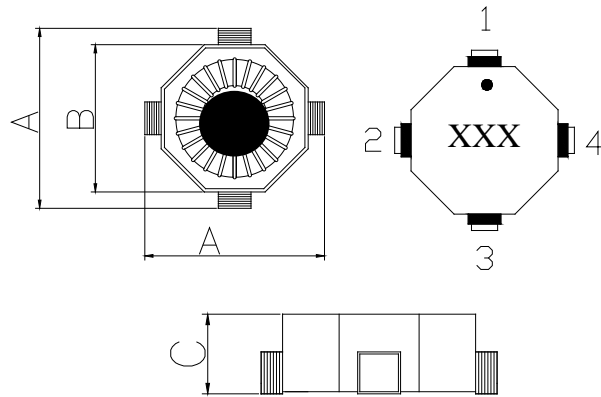
- 1. Maximum power density
- 2. Engineered to provide high efficiency through toridal design



Applications

- 1. 1:1 coupled inductors and 1:1 Isolation transformers
- 2. Low EMI radiation
- 3. Models Available for full load current range of 0.32 to 7.0 Adc

Dimensions (mm)



Product Identification

SPG-100M-PF

SP/ST: SERIES NAME

P/T: CASE Dimensions

G: MATERIAL CODE.

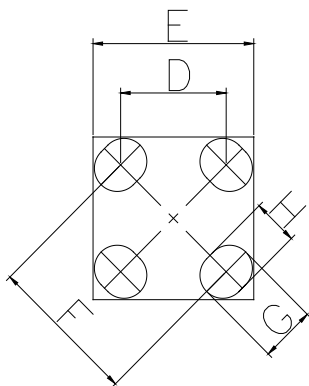
100: INDUCTANCE CODE.

M: TOLERANCE. K=10% M=20%.

PF: Pb-Free

| P/N | A | B | C |
|-----------|------------|---------|--------|
| ST | 12.0Max | 9.5Max | 5.5Max |
| SP | 14.0Max | 12.5Max | 7.0Max |
| Continued | Customized | | |

Recommended Pattern(mm)



| P/N | D | E | F | G | H |
|-----|-----|------|------|---|-----|
| ST | 7.0 | 10.5 | 10.5 | 2 | 1.2 |
| SP | 8.8 | 12.5 | 12.5 | 4 | 3 |



SMD Coupled Inductors-SP/ST Series

SP/ST series For 1:1 Isolation transformersUs

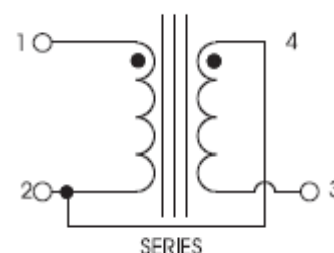
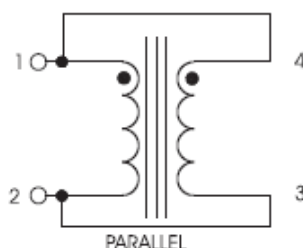
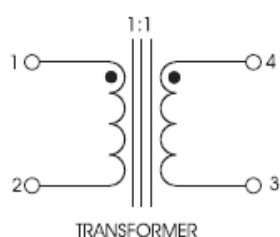
Electrical Characteristics

| Part Number | PARALLEL | | | | SERIES | | | |
|-------------|-----------------------------------|--------------------------------|-----------------------|-------------|-----------------------------------|--------------------------------|-----------------------|-------------|
| | open circuit Inductance uH±20% | full load Inductance uH Min | full load current Adc | Rdc Max (Ω) | open circuit Inductance uH±20% | full load Inductance uH Min | full load current Adc | Rdc Max (Ω) |
| STG-R47M-PF | 0.47 | 0.31 | 5.50 | 0.009 | 1.7 | 1.3 | 2.75 | 0.04 |
| STG-R68M-PF | 0.68 | 0.43 | 5.10 | 0.011 | 2.4 | 1.7 | 2.60 | 0.045 |
| STG-1R2M-PF | 1.2 | 0.73 | 4.50 | 0.014 | 4.3 | 2.9 | 2.55 | 0.056 |
| STG-2R2M-PF | 2.2 | 1.36 | 3.40 | 0.018 | 8 | 5.4 | 1.70 | 0.07 |
| STG-4R7M-PF | 4.7 | 3.37 | 2.00 | 0.041 | 18.8 | 13.5 | 1.00 | 0.16 |
| STG-8R0M-PF | 8 | 5.31 | 1.80 | 0.052 | 32 | 21.2 | 0.90 | 0.21 |
| STG-9R6M-PF | 9.6 | 6.23 | 1.70 | 0.057 | 38.5 | 24.9 | 0.85 | 0.23 |
| STG-150M-PF | 15 | 9.62 | 1.40 | 0.087 | 60 | 38.5 | 0.70 | 0.35 |
| STG-200M-PF | 20 | 14.12 | 1.00 | 0.159 | 82 | 56.5 | 0.50 | 0.64 |
| STG-250M-PF | 25 | 17.07 | 0.96 | 0.177 | 100 | 68.2 | 0.48 | 0.71 |
| STG-320M-PF | 32 | 22.27 | 0.80 | 0.251 | 130 | 89.1 | 0.40 | 1.00 |
| STG-500M-PF | 50 | 33.57 | 0.70 | 0.316 | 200 | 134.2 | 0.35 | 1.26 |
| STG-680M-PF | 68 | 43.65 | 0.66 | 0.373 | 270 | 174.6 | 0.33 | 1.49 |
| STG-101M-PF | 100 | 63.64 | 0.54 | 0.557 | 400 | 254.5 | 0.27 | 2.23 |

NOTE:

1. Operating temperature range $-25^{\circ}\text{C} \sim 85^{\circ}\text{C}$
2. Open circuit inductance Test parameters: 100KHz/0.25V
3. Hi-pot rating: winding to winding 300Vdc min
4. Turns ratio: (1-2):(4-3) 1:1

CONNECTION





SMD Coupled Inductors-SP/ST Series

SP/ST series For 1:1 Isolation transformersUs

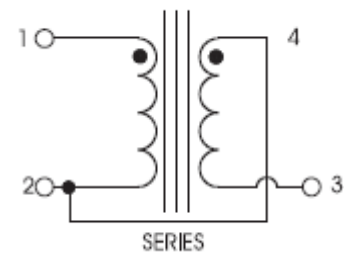
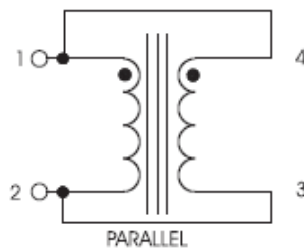
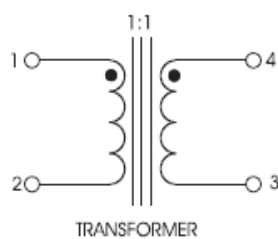
Electrical Characteristics

| Part Number | PARALLEL | | | | SERIES | | | |
|-------------|-----------------------------------|--------------------------------|-----------------------|-------------|-----------------------------------|--------------------------------|-----------------------|-------------|
| | open circuit Inductance uH±20% | full load Inductance uH Min | full load current Adc | Rdc Max (Ω) | open circuit Inductance uH±20% | full load Inductance uH Min | full load current Adc | Rdc Max (Ω) |
| SPB-R47M-PF | 0.47 | 0.32 | 7.00 | 0.004 | 1.8 | 1.3 | 3.50 | 0.016 |
| SPB-R80M-PF | 0.8 | 0.55 | 6.00 | 0.005 | 3.2 | 2.2 | 3.00 | 0.02 |
| SPB-1R2M-PF | 1.2 | 0.85 | 5.50 | 0.006 | 4.9 | 3.4 | 2.50 | 0.024 |
| SPB-1R8M-PF | 1.8 | 1.1 | 5.00 | 0.007 | 7 | 4.2 | 2.90 | 0.028 |
| SPB-5R0M-PF | 5 | 2.6 | 4.40 | 0.014 | 20 | 10.0 | 2.20 | 0.056 |
| SPB-8R0M-PF | 8 | 4.3 | 3.50 | 0.019 | 33 | 17 | 1.75 | 0.073 |
| SPB-100M-PF | 10 | 4.8 | 3.40 | 0.021 | 40 | 19 | 1.70 | 0.079 |
| SPB-150M-PF | 15 | 6.8 | 3.00 | 0.024 | 60 | 27 | 1.50 | 0.096 |
| SPB-200M-PF | 20 | 10.7 | 2.10 | 0.055 | 80 | 42 | 1.05 | 0.22 |
| SPB-250M-PF | 25 | 13.3 | 2.00 | 0.064 | 100 | 53 | 1.00 | 0.254 |
| SPB-320M-PF | 32 | 16.8 | 1.80 | 0.072 | 130 | 67 | 0.90 | 0.288 |
| SPB-500M-PF | 50 | 25.0 | 1.50 | 0.111 | 200 | 100 | 0.75 | 0.444 |
| SPB-680M-PF | 68 | 32.3 | 1.20 | 0.158 | 270 | 140 | 0.60 | 0.63 |
| SPB-101M-PF | 100 | 54.5 | 0.90 | 0.303 | 400 | 220 | 0.46 | 1.21 |
| SPB-151M-PF | 150 | 77.2 | 0.80 | 0.372 | 600 | 300 | 0.41 | 1.49 |
| SPB-201M-PF | 200 | 111.0 | 0.64 | 0.545 | 800 | 440 | 0.32 | 2.18 |
| SPB-301M-PF | 300 | 148.0 | 0.60 | 0.672 | 1200 | 590 | 0.30 | 2.69 |

NOTE:

1. Operating temperature range $-25^{\circ}\text{C} \sim 85^{\circ}\text{C}$
2. Open circuit inductance Test parameters: 100KHz/0.25V
3. Hi-pot rating: winding to winding 300Vdc min
4. Turns ratio: (1-2):(4-3) 1:1

CONNECTION

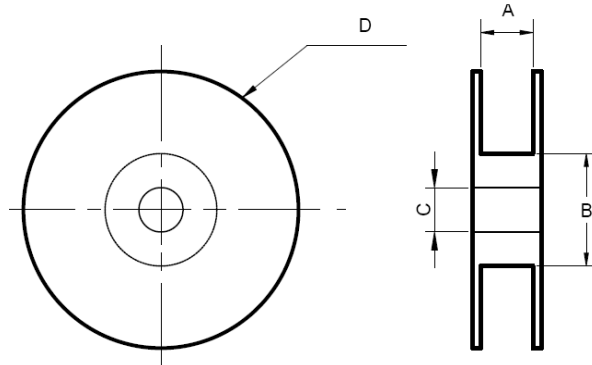




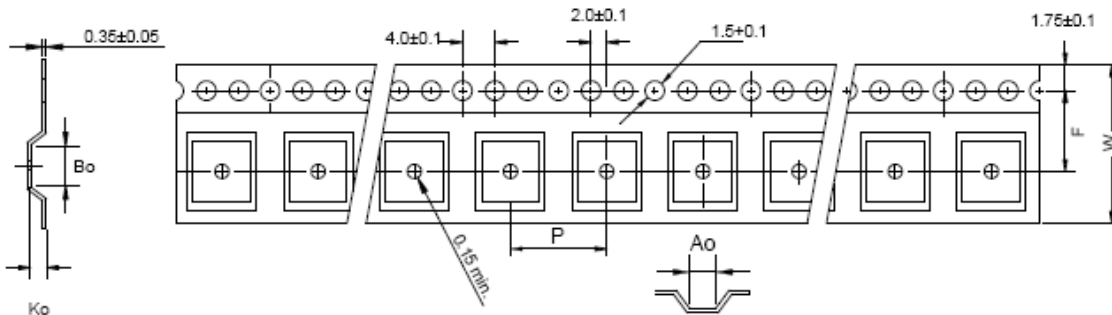
SMD Coupled Inductors-SP/ST Series

PACKAGING

REEL Dimensions (mm)



Tape Dimensions (mm)



TAPE DIMENSIONS AND PACKAGING QUANTITIES

| TYPE | Tape Dimensions | | | | | | | | | | Quantity/Reel |
|-----------|-----------------|------|----|----|------|-----|------|-----|--------|-----|---------------|
| | Ao | Bo | W | P | F | Ko | A | B | C | D | |
| ST-SERIES | 10.5 | 10.6 | 24 | 16 | 11.5 | 5.2 | 24.5 | 100 | 13±0.3 | 330 | 500 |
| SP-SERIES | 12.6 | 12.6 | 24 | 16 | 11.5 | 8.1 | 24.5 | 100 | 13±0.3 | 330 | 500 |