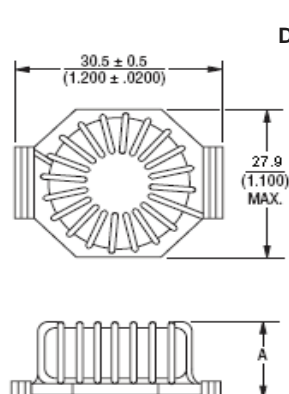
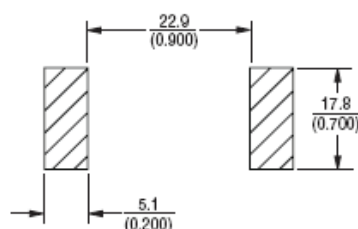


SMTC2120 SMD HIGH CURRENT TOROID



Dimensions: $\frac{\text{mm}}{\text{(Inches)}}$

Recommended Pad Layout



Features

- High Current Capacity
- SMD
- Low Magnetic Radiation

Electrical

Inductance range: 1.0uh to 1000uh
(additional values available)

Tolerance: 1.0uh~8.2uh 20%
10uh~1000uh 10%

Test Frequency: 1KHz 0.1v

Operating Temp: -55°C ~ +105°C

Storage Temp: -55°C ~ +105°C

Temp Rise: $\Delta T=30^{\circ}\text{C}$ Typical at rated IDC

Resistance to Solder Heat

Solder Temp: 260°C 10 sec. max

Test Equipment

(L) & (DCR): HP4263

Current Source: Model 1320 & 11021 LCR

Physical

Packaging: 40 Bags, 400 Carton

Marking: EIA Inductance Code

| Allied Part Number | L(uH) ± 20% @ 1KHZ | DCR m(Ω) Max | IDC (A) | IDC (A) to decrease L by 30% | Dim A Max mm/(in.) |
|--------------------|--------------------------|--------------------|------------|------------------------------------|--------------------------|
| SMTC2120-1R0M-RC | 1.0 | 2 | 25.4 | 34.4 | 20.83/(0.82) |
| SMTC2120-1R2M-RC | 1.2 | 2 | 25.4 | 39.2 | 20.83/(0.82) |
| SMTC2120-1R5M-RC | 1.5 | 3 | 22.0 | 35.6 | 20.83/(0.82) |
| SMTC2120-1R8M-RC | 1.8 | 3 | 22.0 | 32.9 | 20.83/(0.82) |
| SMTC2120-2R2M-RC | 2.2 | 3 | 19.7 | 29.5 | 20.83/(0.82) |
| SMTC2120-2R7M-RC | 2.7 | 3 | 19.7 | 26.3 | 20.83/(0.82) |
| SMTC2120-3R3M-RC | 3.3 | 4 | 18.0 | 34.0 | 20.83/(0.82) |
| SMTC2120-3R9M-RC | 3.9 | 4 | 18.0 | 21.8 | 20.83/(0.82) |
| SMTC2120-4R7M-RC | 4.7 | 5 | 16.6 | 20.0 | 20.83/(0.82) |
| SMTC2120-5R6M-RC | 5.6 | 5 | 15.6 | 18.2 | 20.83/(0.82) |
| SMTC2120-6R8M-RC | 6.8 | 6 | 14.7 | 16.7 | 20.83/(0.82) |
| SMTC2120-8R2M-RC | 8.2 | 6 | 14.7 | 15.1 | 20.83/(0.82) |
| | ±10% | | | | |
| SMTC2120-100K-RC | 10 | 7 | 13.9 | 13.7 | 20.83/(0.82) |
| SMTC2120-120K-RC | 12 | 8 | 12.7 | 12.6 | 20.83/(0.82) |
| SMTC2120-150K-RC | 15 | 9 | 12.2 | 11.0 | 20.83/(0.82) |
| SMTC2120-180K-RC | 18 | 9 | 11.8 | 10.4 | 20.83/(0.82) |
| SMTC2120-220K-RC | 22 | 11 | 11.0 | 9.23 | 20.83/(0.82) |
| SMTC2120-270K-RC | 27 | 12 | 10.4 | 8.33 | 20.83/(0.82) |
| SMTC2120-330K-RC | 33 | 13 | 10.1 | 7.54 | 20.83/(0.82) |
| SMTC2120-390K-RC | 39 | 14 | 9.6 | 6.98 | 20.83/(0.82) |
| SMTC2120-470K-RC | 47 | 19 | 8.2 | 6.30 | 20.07/(0.79) |
| SMTC2120-560K-RC | 56 | 21 | 7.9 | 5.74 | 20.07/(0.79) |
| SMTC2120-680K-RC | 68 | 29 | 6.7 | 5.29 | 19.56/(0.77) |
| SMTC2120-820K-RC | 82 | 32 | 6.4 | 4.84 | 20.10/(0.87) |
| SMTC2120-101K-RC | 100 | 35 | 6.1 | 4.32 | 20.10/(0.87) |
| SMTC2120-121K-RC | 120 | 39 | 5.8 | 3.94 | 20.10/(0.87) |
| SMTC2120-151K-RC | 150 | 43 | 5.5 | 3.56 | 20.10/(0.87) |
| SMTC2120-181K-RC | 180 | 47 | 5.3 | 3.22 | 21.08/(0.83) |
| SMTC2120-221K-RC | 220 | 52 | 5.0 | 2.93 | 21.08/(0.83) |
| SMTC2120-271K-RC | 270 | 72 | 4.2 | 2.66 | 19.81/(0.78) |
| SMTC2120-331K-RC | 330 | 100 | 3.6 | 2.50 | 19.81/(0.78) |
| SMTC2120-391K-RC | 390 | 108 | 3.5 | 2.18 | 21.59/(0.85) |
| SMTC2120-471K-RC | 470 | 119 | 3.3 | 2.00 | 21.59/(0.85) |
| SMTC2120-561K-RC | 560 | 130 | 3.2 | 1.82 | 21.59/(0.85) |
| SMTC2120-681K-RC | 680 | 142 | 3.0 | 1.67 | 21.59/(0.85) |
| SMTC2120-821K-RC | 820 | 157 | 2.9 | 1.51 | 21.59/(0.85) |
| SMTC2120-102K-RC | 1000 | 215 | 2.5 | 1.37 | 20.83/(0.82) |

All specifications subject to change without notice.

SMTC2120 SMD HIGH CURRENT TOROID



Inductance vs. Current

| L(μH) | IDC (A) to decrease L by 10% | IDC (A) to decrease L by 20% | IDC (A) to decrease L by 30% | IDC (A) to decrease L by 40% | IDC (A) to decrease L by 50% |
|-------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| 1.0 | 15.3 | 24.5 | 34.4 | 45.9 | 61.3 |
| 1.2 | 17.4 | 27.9 | 39.2 | 52.2 | 69.7 |
| 1.5 | 15.8 | 25.3 | 35.6 | 47.4 | 63.3 |
| 1.8 | 14.6 | 23.4 | 32.9 | 43.8 | 58.5 |
| 2.2 | 13.1 | 21.0 | 29.5 | 39.3 | 52.5 |
| 2.7 | 11.7 | 18.7 | 26.3 | 35.1 | 46.9 |
| 3.3 | 15.1 | 24.2 | 34.0 | 45.3 | 60.5 |
| 3.9 | 9.70 | 15.5 | 21.8 | 29.1 | 38.9 |
| 4.7 | 8.90 | 14.3 | 20.0 | 26.7 | 35.7 |
| 5.6 | 8.10 | 13.0 | 18.2 | 24.3 | 32.4 |
| 6.8 | 7.40 | 11.9 | 16.7 | 22.2 | 29.6 |
| 8.2 | 6.70 | 10.7 | 15.1 | 20.1 | 26.8 |
| 10 | 6.10 | 9.77 | 13.7 | 18.3 | 24.4 |
| 12 | 5.60 | 8.97 | 12.6 | 16.8 | 22.4 |
| 15 | 4.90 | 7.85 | 11.0 | 14.7 | 19.6 |
| 18 | 4.60 | 7.37 | 10.4 | 13.8 | 18.4 |
| 22 | 4.10 | 6.57 | 9.23 | 12.3 | 16.4 |
| 27 | 3.70 | 5.93 | 8.33 | 11.1 | 14.8 |
| 33 | 3.35 | 5.37 | 7.54 | 10.1 | 13.4 |
| 39 | 3.10 | 4.97 | 6.98 | 9.30 | 12.4 |
| 47 | 2.80 | 4.49 | 6.30 | 8.40 | 11.2 |
| 56 | 2.55 | 4.09 | 5.74 | 7.65 | 10.2 |
| 68 | 2.35 | 3.76 | 5.29 | 7.05 | 9.41 |
| 82 | 2.15 | 3.44 | 4.84 | 6.45 | 8.61 |
| 100 | 1.92 | 3.08 | 4.32 | 5.76 | 7.69 |
| 120 | 1.75 | 2.80 | 3.94 | 5.25 | 7.01 |
| 150 | 1.58 | 2.53 | 3.56 | 4.74 | 6.33 |
| 180 | 1.43 | 2.29 | 3.22 | 4.29 | 5.73 |
| 220 | 1.30 | 2.08 | 2.93 | 3.90 | 5.21 |
| 270 | 1.18 | 1.89 | 2.66 | 3.54 | 4.73 |
| 330 | 1.11 | 1.78 | 2.50 | 3.33 | 4.45 |
| 390 | 0.97 | 1.55 | 2.18 | 2.91 | 3.89 |
| 470 | 0.89 | 1.43 | 2.00 | 2.67 | 3.57 |
| 560 | 0.81 | 1.30 | 1.82 | 2.43 | 3.24 |
| 680 | 0.74 | 1.19 | 1.67 | 2.22 | 2.96 |
| 820 | 0.67 | 1.07 | 1.51 | 2.01 | 2.68 |
| 1000 | 0.61 | 0.98 | 1.37 | 1.83 | 2.44 |

All specifications subject to change without notice.