

Axial Leaded Power Inductors

Type SC10, SC15, SC30, SC55 Series

Type SC10, SC15, SC30, SC55 Series



Tyco quality and reliability are guaranteed in this range of insulated and shielded RF Inductors. The insulated range has a self-extinguishing polyolefin sleeve. Their small size make them ideal for use when space is at a premium. And they are also fully protected from environmental factors. Electrostatic and electromagnetic screening is provided by the magnetic enclosure. A wide range of values are available and the self extinguishing polyolefin sleeve enhances environmental protection. The SC series was originally designed for military applications but now has widespread industrial use.

Key Features

- Wide Inductance Range
- Insulated Packaging
- Four Sizes
- Flame Retardant
- Wide Temperature Range
- Established Reliability
- Fully Protected from the Environment
- Available from Distribution

Characteristics - Electrical

| | SC10 | SC15 | SC30 | SC55 |
|-----------------------------------------|--------------------------------------------------------------------------|-----------------|-----------------|-----------------|
| Inductance Range: | See Table - E12 Grid (Non-standard values available to special order) | | | |
| Selection Tolerance: | ±10% | ±10% | ±10% | ±10% |
| Power Rating at 70°C: | 0.33W | See Below | 0.25W | 0.30W |
| Isolation Voltage: | 700V DC or AC peak | | | |
| Limits of Inductance Change: | 5% after 1000 hours endurance | | | |
| Operating Temperature Range: | -55°C to +100°C | -55°C to +100°C | -55°C to +100°C | -55°C to +125°C |
| Recommended Storage Temperature: | 0°C to +35°C | | | |
| Climatic Category: | 55/100/21 | 55/100/21 | 55/100/21 | 55/125/21 |

SC15 Power Rating

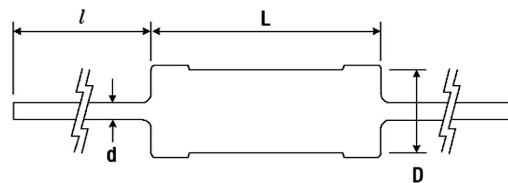
Values between 0.15uH and 4.7uH - Power Rating 0.33 Watt

Values between 5.6uH and 330uH - Power Rating 0.20 Watt

Packaging and Marking

| Type | Ammo Pack | Reeled | Weight per Component | Marking |
|------|------------|-------------|----------------------|---------|
| SC10 | 500 Pieces | 1500 Pieces | - | LC10 |
| SC15 | 500 Pieces | 1500 Pieces | - | LC15 |
| SC30 | 500 Pieces | 2500 Pieces | - | LC30 |
| SC55 | 500 Pieces | 1500 Pieces | 0.6g | LC55 |

Dimensions



| Size | L Max. | D Max. | l Min. | d |
|------|--------|--------|--------|-------|
| SC10 | 10.0mm | 4.2mm | 25mm | 0.6mm |
| SC15 | 10.0mm | 4.5mm | 30mm | 0.6mm |
| SC30 | 7.0mm | 2.8mm | 25mm | 0.5mm |
| SC55 | 11.4mm | 5.2mm | 30mm | 0.6mm |

Characteristics - Electrical Type SC10 - Section 1

| Inductance Value - µH | Inductance Code | Test Freq. MHz | Q Factor Min. | S.R.F. MHz Min. | Max. DC Resistance Ohms at 20°C | Direct Current at 70°C Max. mA |
|-----------------------|-----------------|----------------|---------------|-----------------|---------------------------------|--------------------------------|
| 0.10 | R10 | 25 | 50 | 500 | 0.055 | 2060 |
| 0.12 | R12 | 25 | 50 | 475 | 0.060 | 1970 |
| 0.15 | R15 | 25 | 50 | 450 | 0.065 | 1900 |
| 0.18 | R18 | 25 | 50 | 425 | 0.070 | 1830 |
| 0.22 | R22 | 25 | 50 | 400 | 0.075 | 1770 |
| 0.27 | R27 | 25 | 50 | 380 | 0.085 | 1660 |
| 0.33 | R33 | 25 | 50 | 360 | 0.095 | 1570 |
| 0.39 | R39 | 25 | 50 | 330 | 0.11 | 1460 |
| 0.47 | R47 | 25 | 50 | 300 | 0.12 | 1390 |
| 0.56 | R56 | 25 | 50 | 280 | 0.14 | 1290 |
| 0.68 | R68 | 25 | 45 | 260 | 0.16 | 1210 |
| 0.82 | R82 | 25 | 45 | 235 | 0.26 | 950 |
| 1.0 | 1R0 | 25 | 45 | 210 | 0.30 | 880 |
| 1.2 | 1R2 | 7.9 | 32 | 190 | 0.50 | 685 |
| 1.5 | 1R5 | 7.9 | 32 | 170 | 0.60 | 625 |
| 1.8 | 1R8 | 7.9 | 32 | 156 | 0.75 | 560 |
| 2.2 | 2R2 | 7.9 | 32 | 140 | 1.10 | 460 |
| 2.7 | 2R7 | 7.9 | 32 | 125 | 1.40 | 410 |
| 3.3 | 3R3 | 7.9 | 32 | 115 | 1.90 | 350 |

Type SC10, SC15, SC30, SC55 Series

Type SC10 - Section 2

| Inductance Value - μ H | Inductance Code | Test Freq. MHz | Q Factor Min. | S.R.F. MHz Min. | Max. DC Resistance Ohms at 20°C | Direct Current at 70°C Max. mA |
|----------------------------|-----------------|----------------|---------------|-----------------|---------------------------------|--------------------------------|
| 3.9 | 3R9 | 7.9 | 45 | 75 | 0.25 | 970 |
| 4.7 | 4R7 | 7.9 | 45 | 65 | 0.35 | 820 |
| 5.6 | 5R6 | 7.9 | 45 | 60 | 0.40 | 765 |
| 6.8 | 6R8 | 7.9 | 45 | 55 | 0.55 | 650 |
| 8.2 | 8R2 | 7.9 | 45 | 50 | 0.75 | 560 |
| 10 | 100 | 7.9 | 45 | 45 | 0.9 | 510 |
| 12 | 120 | 2.5 | 55 | 40 | 1.1 | 460 |
| 15 | 150 | 2.5 | 55 | 35 | 1.5 | 395 |
| 18 | 180 | 2.5 | 55 | 30 | 2.7 | 295 |
| 22 | 220 | 2.5 | 55 | 27 | 3.0 | 280 |
| 27 | 270 | 2.5 | 55 | 25 | 4.5 | 230 |
| 33 | 330 | 2.5 | 55 | 22 | 5.2 | 210 |
| 39 | 390 | 2.5 | 55 | 20 | 7.5 | 175 |
| 47 | 470 | 2.5 | 55 | 18 | 9.6 | 156 |

Type SC10 - Section 3

| Inductance Value - μ H | Inductance Code | Test Freq. MHz | Q Factor Min. | S.R.F. MHz Min. | Max. DC Resistance Ohms at 20°C | Direct Current at 70°C Max. mA |
|----------------------------|-----------------|----------------|---------------|-----------------|---------------------------------|--------------------------------|
| 56 | 560 | 2.5 | 55 | 11 | 8.1 | 170 |
| 68 | 680 | 2.5 | 55 | 10 | 9.0 | 161 |
| 82 | 820 | 2.5 | 50 | 8.5 | 10.0 | 153 |
| 100 | 101 | 2.5 | 50 | 7.0 | 11.0 | 146 |
| 120 | 121 | 0.79 | 40 | 6.5 | 12.0 | 140 |
| 150 | 151 | 0.79 | 40 | 5.5 | 13.0 | 134 |
| 180 | 181 | 0.79 | 45 | 5.0 | 15.0 | 125 |
| 220 | 221 | 0.79 | 45 | 4.2 | 17.0 | 117 |
| 270 | 271 | 0.79 | 45 | 3.8 | 19.5 | 110 |
| 330 | 331 | 0.79 | 45 | 3.3 | 22.0 | 103 |
| 390 | 391 | 0.79 | 45 | 3.1 | 24.5 | 98 |
| 470 | 471 | 0.79 | 45 | 2.9 | 26.5 | 94 |
| 560 | 561 | 0.79 | 45 | 2.7 | 30.0 | 88 |
| 680 | 681 | 0.79 | 45 | 2.5 | 33.0 | 84 |
| 820 | 821 | 0.79 | 45 | 2.3 | 36.5 | 80 |
| 1000 | 102 | 0.79 | 40 | 2.2 | 40.0 | 76 |

Section 1 was formerly the Tyco C10 Series, Section 2 was formerly the Tyco C11 Series, Section 3 was formerly the Tyco C12 Series

**Characteristics - Electrical
Type SC15**

| Inductance Value - μ H | Inductance Code | Test Freq. MHz | Q Factor Min. | S.R.F. MHz Min. | Max. DC Resistance Ohms at 20°C | Direct Current at 70°C Max. mA |
|----------------------------|-----------------|----------------|---------------|-----------------|---------------------------------|--------------------------------|
| 0.15 | R15 | 25 | 50 | 525 | 0.030 | 2790 |
| 0.18 | R18 | 25 | 45 | 480 | 0.040 | 2420 |
| 0.22 | R22 | 25 | 50 | 450 | 0.055 | 2060 |
| 0.27 | R27 | 25 | 45 | 400 | 0.070 | 1830 |
| 0.33 | R33 | 25 | 45 | 360 | 0.090 | 1610 |
| 0.39 | R39 | 25 | 45 | 350 | 0.100 | 1530 |
| 0.47 | R47 | 25 | 45 | 310 | 0.120 | 1400 |
| 0.56 | R56 | 25 | 50 | 280 | 0.135 | 1320 |
| 0.68 | R68 | 25 | 50 | 250 | 0.15 | 1250 |
| 0.82 | R82 | 25 | 50 | 220 | 0.22 | 1030 |
| 1.0 | 1R0 | 25 | 50 | 200 | 0.29 | 900 |
| 1.2 | 1R2 | 7.9 | 33 | 180 | 0.42 | 750 |
| 1.5 | 1R5 | 7.9 | 33 | 160 | 0.50 | 685 |
| 1.8 | 1R8 | 7.9 | 33 | 150 | 0.65 | 600 |
| 2.2 | 2R2 | 7.9 | 33 | 135 | 0.95 | 495 |

Type SC10, SC15, SC30, SC55 Series

**Characteristics - Electrical
Type SC15 (continued)**

| Inductance Value - μ H | Inductance Code | Test Freq. MHz | Q Factor Min. | S.R.F. MHz Min. | Max. DC Resistance Ohms at 20°C | Direct Current at 70°C Max. mA |
|----------------------------|-----------------|----------------|---------------|-----------------|---------------------------------|--------------------------------|
| 2.7 | 2R7 | 7.9 | 33 | 120 | 1.20 | 440 |
| 3.3 | 3R3 | 7.9 | 33 | 110 | 2.00 | 340 |
| 3.9 | 3R9 | 7.9 | 33 | 100 | 2.30 | 320 |
| 4.7 | 4R7 | 7.9 | 33 | 90 | 2.60 | 300 |
| 5.6 | 5R6 | 7.9 | 45 | 60 | 0.32 | 690 |
| 6.8 | 6R8 | 7.9 | 50 | 55 | 0.50 | 550 |
| 8.2 | 8R2 | 7.9 | 50 | 50 | 0.60 | 505 |
| 10 | 100 | 7.9 | 55 | 45 | 0.90 | 415 |
| 12 | 120 | 2.5 | 65 | 42 | 1.10 | 375 |
| 15 | 150 | 2.5 | 65 | 40 | 1.40 | 330 |
| 18 | 180 | 2.5 | 75 | 34 | 2.25 | 260 |
| 22 | 220 | 2.5 | 75 | 30 | 2.50 | 250 |
| 24* | 240* | 2.5 | 60 | 27 | 2.50 | 250 |
| 27 | 270 | 2.5 | 60 | 25 | 2.60 | 242 |
| 30 | 300 | 2.5 | 65 | 21 | 2.80 | 230 |
| 33 | 330 | 2.5 | 65 | 19 | 3.00 | 227 |
| 36* | 360* | 2.5 | 60 | 15.5 | 2.50 | 250 |
| 39 | 390 | 2.5 | 60 | 14.5 | 2.60 | 244 |
| 43* | 430* | 2.5 | 60 | 13.7 | 2.70 | 238 |
| 47 | 470 | 2.5 | 55 | 13.0 | 2.75 | 235 |
| 51* | 510* | 2.5 | 55 | 12.7 | 2.85 | 231 |
| 56 | 560 | 2.5 | 55 | 12.0 | 3.00 | 225 |
| 62* | 620* | 2.5 | 55 | 11.5 | 3.15 | 220 |
| 68 | 680 | 2.5 | 55 | 11.0 | 3.30 | 215 |
| 75* | 750* | 2.5 | 55 | 10.5 | 3.70 | 203 |
| 82 | 820 | 2.5 | 50 | 10.3 | 3.90 | 200 |
| 91* | 910* | 2.5 | 50 | 10.0 | 4.30 | 188 |
| 100 | 101 | 2.5 | 50 | 9.5 | 4.50 | 185 |
| 110* | 111* | 0.79 | 60 | 8.9 | 4.90 | 176 |
| 120 | 121 | 0.79 | 65 | 8.7 | 5.20 | 170 |
| 130* | 131* | 0.79 | 65 | 8.5 | 5.45 | 167 |
| 150 | 151 | 0.79 | 65 | 8.0 | 6.05 | 160 |
| 160* | 161* | 0.79 | 65 | 7.5 | 6.40 | 154 |
| 180 | 181 | 0.79 | 65 | 7.0 | 6.75 | 150 |
| 200* | 201* | 0.79 | 65 | 6.5 | 7.10 | 147 |
| 220 | 221 | 0.79 | 65 | 6.2 | 7.45 | 144 |
| 240* | 241* | 0.79 | 65 | 5.9 | 7.80 | 140 |
| 270 | 271 | 0.79 | 65 | 5.7 | 9.00 | 131 |
| 300* | 301* | 0.79 | 65 | 5.4 | 11.50 | 118 |
| 330 | 331 | 0.79 | 65 | 5.1 | 12.50 | 111 |

* Starred Items have a standard tolerance of 5% not 10%

**Characteristics - Electrical
Type SC30**

| Inductance Value - μ H | Inductance Code | Test Freq. MHz | Q Factor Min. | S.R.F. MHz Min. | Max. DC Resistance Ohms at 20°C | Direct Current at 70°C Max. mA |
|----------------------------|-----------------|----------------|---------------|-----------------|---------------------------------|--------------------------------|
| 0.022 | R022 | 50 | 33 | 1245 | 0.006 | 3000 |
| 0.027 | R027 | 50 | 33 | 1200 | 0.010 | 2800 |
| 0.033 | R033 | 50 | 33 | 1175 | 0.026 | 2620 |
| 0.039 | R039 | 50 | 33 | 1130 | 0.033 | 2320 |
| 0.047 | R047 | 50 | 33 | 1060 | 0.038 | 2170 |
| 0.056 | R056 | 50 | 33 | 990 | 0.048 | 1930 |
| 0.068 | R068 | 50 | 33 | 900 | 0.055 | 1800 |
| 0.082 | R082 | 50 | 33 | 750 | 0.065 | 1650 |
| 0.10 | R10 | 25 | 40 | 680 | 0.080 | 1490 |
| 0.12 | R12 | 25 | 40 | 640 | 0.090 | 1400 |
| 0.15 | R15 | 25 | 38 | 600 | 0.10 | 1330 |
| 0.18 | R18 | 25 | 35 | 550 | 0.12 | 1210 |

The SC30 Series was formerly the Tyco C30 Series

Type SC10, SC15, SC30, SC55 Series

**Characteristics - Electrical
Type SC30 (continued)**

| Inductance Value - μ H | Inductance Code | Test Freq. MHz | Q Factor Min. | S. R. F. MHz Min. | Max. DC Resistance Ohms at 20°C | Direct Current at 70°C Max. mA |
|----------------------------|-----------------|----------------|---------------|-------------------|---------------------------------|--------------------------------|
| 0.22 | R22 | 25 | 33 | 510 | 0.14 | 1120 |
| 0.27 | R27 | 25 | 33 | 430 | 0.16 | 1050 |
| 0.33 | R33 | 25 | 30 | 410 | 0.22 | 900 |
| 0.39 | R39 | 25 | 30 | 365 | 0.30 | 770 |
| 0.47 | R47 | 25 | 30 | 330 | 0.35 | 710 |
| 0.56 | R56 | 25 | 30 | 300 | 0.50 | 595 |
| 0.68 | R68 | 25 | 28 | 275 | 0.60 | 540 |
| 0.82 | R82 | 25 | 28 | 250 | 0.85 | 455 |
| 1.0 | 1R0 | 25 | 25 | 230 | 1.00 | 420 |
| 1.2 | 1R2 | 7.9 | 25 | 150 | 0.18 | 990 |
| 1.5 | 1R5 | 7.9 | 28 | 140 | 0.22 | 895 |
| 1.8 | 1R8 | 7.9 | 30 | 125 | 0.30 | 765 |
| 2.2 | 2R2 | 7.9 | 30 | 115 | 0.40 | 665 |
| 2.7 | 2R7 | 7.9 | 37 | 100 | 0.55 | 565 |
| 3.3 | 3R3 | 7.9 | 45 | 90 | 0.85 | 455 |
| 3.9 | 3R9 | 7.9 | 45 | 80 | 1.0 | 420 |
| 4.7 | 4R7 | 7.9 | 45 | 75 | 1.2 | 384 |
| 5.6 | 5R6 | 7.9 | 50 | 65 | 1.8 | 314 |
| 6.8 | 6R8 | 7.9 | 50 | 60 | 2.0 | 298 |
| 8.2 | 8R2 | 7.9 | 55 | 55 | 2.7 | 256 |
| 10 | 100 | 7.9 | 55 | 50 | 3.7 | 219 |
| 12 | 120 | 2.5 | 45 | 40 | 2.7 | 256 |
| 15 | 150 | 2.5 | 45 | 35 | 2.8 | 251 |
| 18 | 180 | 2.5 | 50 | 30 | 3.1 | 239 |
| 22 | 220 | 2.5 | 50 | 25 | 3.3 | 232 |
| 27 | 270 | 2.5 | 50 | 20 | 3.5 | 225 |
| 33 | 330 | 2.5 | 45 | 24 | 3.4 | 228 |
| 39 | 390 | 2.5 | 45 | 22 | 3.6 | 222 |
| 47 | 470 | 2.5 | 45 | 20 | 4.5 | 198 |
| 56 | 560 | 2.5 | 45 | 18 | 5.7 | 176 |
| 68 | 680 | 2.5 | 50 | 15 | 6.7 | 162 |
| 82 | 820 | 2.5 | 50 | 14 | 7.3 | 156 |
| 100 | 101 | 2.5 | 50 | 13 | 8.0 | 149 |
| 120 | 121 | 0.79 | 30 | 12 | 13.0 | 116 |
| 150 | 151 | 0.79 | 30 | 11 | 15.0 | 108 |
| 180 | 181 | 0.79 | 30 | 10 | 17.0 | 102 |
| 220 | 221 | 0.79 | 30 | 9 | 21.0 | 92 |
| 270 | 271 | 0.79 | 30 | 8 | 25.0 | 84 |
| 330 | 331 | 0.79 | 30 | 7 | 28.0 | 79 |
| 390 | 391 | 0.79 | 30 | 6.5 | 35.0 | 71 |
| 470 | 471 | 0.79 | 30 | 6 | 42.0 | 65 |
| 560 | 561 | 0.79 | 30 | 5 | 46.0 | 62 |
| 680 | 681 | 0.79 | 30 | 4 | 60.0 | 54 |
| 820 | 821 | 0.79 | 30 | 3.8 | 65.0 | 52 |
| 1000 | 102 | 0.79 | 30 | 3.4 | 72.0 | 49 |

The SC30 Series was formerly the Tyco C30 Series

Type SC10, SC15, SC30, SC55 Series

**Characteristics - Electrical
Type SC55**

| Inductance Value (µH) | Inductance Code | Q Min. | Test Freq MHz | S.R.F. MHz Min. | Max. DC Resistance Ohms | Direct Current at 85°C Max. mA | Body Marking |
|-----------------------|-----------------|--------|---------------|-----------------|-------------------------|--------------------------------|--------------|
| 1.0 | 1R0 | 45 | 7.9 | 190.0 | 0.04 | 2200 | 1uH0-K |
| 1.5 | 1R5 | 65 | 7.9 | 155.0 | 0.05 | 2000 | 1uH5-K |
| 2.2 | 2R2 | 60 | 7.9 | 130.0 | 0.06 | 1800 | 2uH2-K |
| 3.3 | 3R3 | 50 | 7.9 | 110.0 | 0.07 | 1700 | 3uH3-K |
| 4.7 | 4R7 | 50 | 7.9 | 95.0 | 0.12 | 1300 | 4uH7-K |
| 6.8 | 6R8 | 60 | 7.9 | 85.0 | 0.22 | 1000 | 6uH8-K |
| 10 | 100 | 50 | 7.9 | 65.0 | 0.35 | 750 | 10uH-K |
| 15 | 150 | 55 | 2.5 | 55.0 | 0.60 | 600 | 15uH-K |
| 22 | 220 | 65 | 2.5 | 45.0 | 1.10 | 430 | 22uH-K |
| 33 | 330 | 85 | 2.5 | 35.0 | 2.00 | 300 | 33uH-K |
| 47 | 470 | 70 | 2.5 | 20.0 | 2.50 | 270 | 47uH-K |
| 68 | 680 | 65 | 2.5 | 16.0 | 3.00 | 250 | 68uH-K |
| 100 | 101 | 65 | 2.5 | 14.0 | 4.00 | 220 | mH10-K |
| 150 | 151 | 80 | 0.79 | 9.5 | 5.80 | 230 | mH15-K |
| 220 | 221 | 80 | 0.79 | 8.0 | 7.30 | 200 | mH22-K |
| 330 | 331 | 80 | 0.79 | 7.5 | 12.00 | 160 | mH33-K |
| 470 | 471 | 80 | 0.79 | 6.5 | 20.00 | 120 | mH47-K |
| 680 | 681 | 85 | 0.79 | 5.0 | 24.00 | 110 | mH68-K |
| 1000 | 102 | 85 | 0.79 | 3.0 | 30.00 | 100 | 1mH0-K |

**How to Order
SC30**

| Common Part |
|-------------|
| SC10 |
| SC15 |
| SC30 |
| SC55 |

104

| Inductance Value |
|---------------------------------------|
| Please state code given in data above |

K

| Tolerance |
|-----------|
| K - 10% |

T

| Packaging |
|---------------|
| R - Reeled |
| T - Ammo Pack |