

## Type SC10, SC15, SC30, SC55 Series

### Key Features

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



TE Connectivity 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.

### Characteristics - Electrical

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

## Type SC10, SC15, SC30, SC55 Series

### Characteristics - Electrical - Type SC10 - Section 1

| Inductance Value - $\mu$ 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 |
|----------------------------|-----------------|----------------|---------------|-----------------|---------------------------------|--------------------------------|
| 0.10                       | 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 - Section 2

| Inductance Value - $\mu$ 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 - $\mu$ 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 TE Connectivity C10 Series, Section 2 was formerly the TE Connectivity C11 Series, Section 3 was formerly the TE Connectivity C12 Series

## Type SC10, SC15, SC30, SC55 Series

### Characteristics - Electrical Type SC15

| Inductance Value - $\mu$ 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                            |
| 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                            |

## Type SC10, SC15, SC30, SC55 Series

### Characteristics - Electrical Type SC30

| Inductance Value - $\mu$ 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                           |
| 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 TE Connectivity C30 Series

## Type SC10, SC15, SC30, SC55 Series

### Characteristics - Electrical Type SC55

| Inductance Value ( $\mu$ H) | 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                         | 104                                   | K                | T                           |
|------------------------------|---------------------------------------|------------------|-----------------------------|
| <b>Common Part</b>           | <b>Inductance Value</b>               | <b>Tolerance</b> | <b>Packaging</b>            |
| SC10<br>SC15<br>SC30<br>SC55 | Please state code given in data above | K - 10%          | R - Reeled<br>T - Ammo Pack |

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