

## 1800R Series

Radial Lead Inductors



## **FEATURES**

| RoHS | comr | iliant |
|------|------|--------|
|      |      |        |

- Radial format
- Up to 5.35A loc
- 4.7µH to 10mH
- Low DC resistance
- Compact size
- MIL-I-23053/5 class III sleeving
- Fully tinned leads
- Supplied in packs of 100
- Custom & axial parts available
- Backward compatible with Sn/Pb soldering systems

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The 1800R Series of inductors are particularly suited to use with a wide variety of switching regulators. Offering high current handling with a small footprint, the devices are ideal where space is at a premium.

| SELECTION  | GUIDE                        |                         |               |           |      |      |
|------------|------------------------------|-------------------------|---------------|-----------|------|------|
| Order Code | Inductance<br>(1kHz, 0.1Vac) | DC Current <sup>1</sup> | DC Resistance | Q @ f kHz |      | SRF  |
|            | ±10%                         | Max.                    | Max. Nom.     |           | Nom. |      |
|            | μН                           | Α                       | mΩ            | Q         | f    | MHz  |
| 18R472C    | 4.72                         | 5.35                    | 9.0           | 106       | 1000 | 35.1 |
| 18R682C    | 6.8                          | 4.15                    | 12.0          | 73        | 500  | 26.3 |
| 18R103C    | 10.0                         | 3.45                    | 15.0          | 59        | 500  | 23.8 |
| 18R153C    | 15.0                         | 3.00                    | 18.0          | 55        | 500  | 17.0 |
| 18R223C    | 22.0                         | 2.42                    | 25.0          | 51        | 500  | 14.1 |
| 18R333C    | 33.0                         | 2.00                    | 40.0          | 48        | 500  | 11.5 |
| 18R473C    | 47.0                         | 1.65                    | 55.0          | 46        | 500  | 9.85 |
| 18R683C    | 68.0                         | 1.35                    | 70.0          | 27        | 100  | 8.29 |
| 18R104C    | 100.0                        | 1.20                    | 100.0         | 40        | 100  | 7.40 |
| 18R154C    | 150.0                        | 1.10                    | 165.0         | 40        | 100  | 5.58 |
| 18R224C    | 220.0                        | 0.90                    | 230.0         | 39        | 100  | 4.00 |
| 18R254C    | 250.0                        | 0.80                    | 255.0         | 40        | 100  | 3.85 |
| 18R334C    | 330.0                        | 0.73                    | 335.0         | 49        | 100  | 3.57 |
| 18R474C    | 470.0                        | 0.60                    | 465.0         | 50        | 100  | 2.81 |
| 18R684C    | 680.0                        | 0.53                    | 630.0         | 48        | 100  | 2.43 |
| 18R105C    | 1.0mH                        | 0.44                    | 1.0Ω          | 92        | 50   | 1.82 |
| 18R155C    | 1.5mH                        | 0.33                    | 1.5Ω          | 106       | 50   | 1.60 |
| 18R225C    | 2.2mH                        | 0.30                    | 2.2Ω          | 106       | 50   | 1.41 |
| 18R335C    | 3.3mH                        | 0.22                    | 3.5Ω          | 139       | 50   | 1.04 |
| 18R475C    | 4.7mH                        | 0.20                    | 4.6Ω          | 126       | 40   | 0.87 |
| 18R685C    | 6.8mH                        | 0.15                    | 7.0Ω          | 143       | 40   | 0.71 |
| 18R106C    | 10.0mH                       | 0.13                    | 12.0Ω         | 142       | 40   | 0.58 |

| TYPICAL CORE/WIRE CHARACTERISTICS     |                                       |                                     |                                     |  |  |
|---------------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|--|--|
| Inductance Temperature<br>Coefficient | Resistance Temperature<br>Coefficient | Curie Temperature (T <sub>c</sub> ) | Saturation Flux (B <sub>SAT</sub> ) |  |  |
| 430ppm                                | 4000ppm                               | 190°C                               | 325mT                               |  |  |

| ABSOLUTE MAXIMUM RATINGS             |                |  |  |
|--------------------------------------|----------------|--|--|
| Operating free air temperature range | 0°C to 70°C    |  |  |
| Storage temperature range            | -55°C to 125°C |  |  |

| SOLDERING INFORMATION <sup>3</sup> |                      |  |  |
|------------------------------------|----------------------|--|--|
| Peak wave solder temperature       | 300°C for 10 seconds |  |  |
| Pin finish                         | Bright tin           |  |  |

All specifications typical at  $T_A$ =25°C

- 1 Maximum DC current occurs when either the inductance falls to 90% of its nominal value or when its temperature rise reaches 30°C, whichever is sooner.
- 2 Tolerance ±15%.
- 3 For further information, please visit www.murata-ps.com/rohs



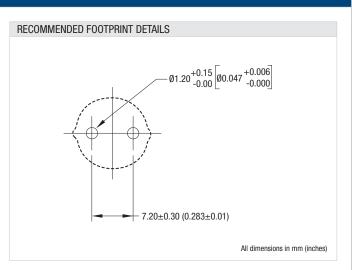






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## PACKAGE SPECIFICATIONS MECHANICAL DIMENSIONS 13.70 (0.539) Max. 15.90 (0.625)Max. 18R103C 13.00 (0.511) Max. $45\pm1.50$ (1.77±0.059) 0.60±0.1 (0.024±0.002) All dimensions in mm (inches). Package weight 4.6g Typ.



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