197 Series High Frequency Reactors

197E5

Features:
- High permeability core ideal for applications <50Khz
- High self-resonant frequency values
- Rugged construction with aluminum base and stainless steel band
- Open-style terminal for maximum versatility
- Weight: 2.5 lbs.

ELECTRICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Typical</th>
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<tbody>
<tr>
<td>Inductance with bias</td>
<td>4.0mH ±15% @ 5ADC</td>
</tr>
<tr>
<td>Operating Frequency</td>
<td>60Hz – 10KHz</td>
</tr>
<tr>
<td>Self-Resonant Frequency</td>
<td>250.5 KHz</td>
</tr>
<tr>
<td>Impedance @ SRF</td>
<td>68.98k Ohms</td>
</tr>
<tr>
<td>Ripple Current</td>
<td>20% peak-to-peak</td>
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<tr>
<td>DCR</td>
<td>232mΩ ±15% @20°C</td>
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<tr>
<td>Dielectric Strength</td>
<td>2500V RMS</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>-40 To 105°C</td>
</tr>
<tr>
<td>Core material</td>
<td>Carbonyl Iron Powder</td>
</tr>
</tbody>
</table>

DIMENSIONAL DETAILS:
PERFORMANCE GRAPHS:

**Inductance Vs DC Bias Current**

![Graph showing inductance vs DC bias current with frequencies 60Hz, 1KHz, and 10KHz.

**Quality Factor**

![Graph showing quality factor vs frequency with a smooth curve.

**Impedance Vs DC Bias Current**

![Graph showing impedance vs DC bias current with frequencies 60Hz, 1KHz, and 10KHz.

**Power Loss @ 10KHz 5ADC**

![Graph showing power loss vs ripple current with labels for total watts and core loss.

**MEASUREMENT INSTRUMENTS**

- Voltech DC1000A Precision DC Bias Current Source
- Wayne Kerr 3255B with a 3265B Inductance Analyzer
- Agilent E4980A Precision LCR Meter
- HP 4192A LF Impedance Analyzer
- Keithley 2010 DVM

**TEST & DIMENSIONAL CONDITIONS**

1. Performance graphs @1.0 volt AC drive.
2. Power loss computation from core manufacturer’s data.
3. The results are typical and are subject to normal manufacturing and electrical tolerances.