Ferrite Chip Inductors - 0805AF (2012)

- Higher inductance values than ceramic 0805 inductors
- Inductance values from 0.11 µH to 22 µH
- Heavier gauge wire for low DCR
- Ferrite construction for high current handling

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance ±5% (µH)</th>
<th>Q typ</th>
<th>Impedance typ (Ohms)</th>
<th>SRF typ (MHz)</th>
<th>DCR max (mA)</th>
<th>Irms (mA)</th>
<th>Color code</th>
</tr>
</thead>
<tbody>
<tr>
<td>0805AF-111XJ</td>
<td>0.11 @ 7.9 MHz</td>
<td>18 @ 7.9 MHz</td>
<td>370 @ 500MHz</td>
<td>1260</td>
<td>0.05</td>
<td>940</td>
<td>Brown</td>
</tr>
<tr>
<td>0805AF-681XJ</td>
<td>0.68 @ 7.9 MHz</td>
<td>19 @ 7.9 MHz</td>
<td>430 @ 100MHz</td>
<td>425</td>
<td>0.30</td>
<td>660</td>
<td>Orange</td>
</tr>
<tr>
<td>0805AF-102XJ</td>
<td>1.0 @ 7.9 MHz</td>
<td>17 @ 7.9 MHz</td>
<td>670 @ 100MHz</td>
<td>355</td>
<td>0.39</td>
<td>650</td>
<td>Yellow</td>
</tr>
<tr>
<td>0805AF-122XJ</td>
<td>1.2 @ 7.9 MHz</td>
<td>19 @ 7.9 MHz</td>
<td>860 @ 100MHz</td>
<td>375</td>
<td>0.64</td>
<td>440</td>
<td>Brown</td>
</tr>
<tr>
<td>0805AF-152XJ</td>
<td>1.5 @ 7.9 MHz</td>
<td>20 @ 7.9 MHz</td>
<td>1000 @ 100MHz</td>
<td>285</td>
<td>0.74</td>
<td>390</td>
<td>Green</td>
</tr>
<tr>
<td>0805AF-182XJ</td>
<td>1.8 @ 7.9 MHz</td>
<td>20 @ 7.9 MHz</td>
<td>1360 @ 100MHz</td>
<td>300</td>
<td>0.98</td>
<td>370</td>
<td>Blue</td>
</tr>
<tr>
<td>0805AF-222XJ</td>
<td>2.2 @ 7.9 MHz</td>
<td>19 @ 7.9 MHz</td>
<td>840 @ 50MHz</td>
<td>105</td>
<td>0.98</td>
<td>350</td>
<td>Brown</td>
</tr>
<tr>
<td>0805AF-272XJ</td>
<td>2.7 @ 7.9 MHz</td>
<td>19 @ 7.9 MHz</td>
<td>1050 @ 50MHz</td>
<td>100</td>
<td>1.16</td>
<td>320</td>
<td>Violet</td>
</tr>
<tr>
<td>0805AF-332XJ</td>
<td>3.3 @ 7.9 MHz</td>
<td>19 @ 7.9 MHz</td>
<td>1670 @ 50MHz</td>
<td>85</td>
<td>1.20</td>
<td>330</td>
<td>Gray</td>
</tr>
<tr>
<td>0805AF-472XJ</td>
<td>4.7 @ 7.9 MHz</td>
<td>18 @ 7.9 MHz</td>
<td>950 @ 25MHz</td>
<td>55</td>
<td>1.50</td>
<td>280</td>
<td>Black</td>
</tr>
<tr>
<td>0805AF-682XJ</td>
<td>6.8 @ 7.9 MHz</td>
<td>18 @ 7.9 MHz</td>
<td>450 @ 10MHz</td>
<td>37</td>
<td>1.90</td>
<td>240</td>
<td>Brown</td>
</tr>
<tr>
<td>0805AF-103XJ</td>
<td>10 @ 2.5 MHz</td>
<td>18 @ 2.5 MHz</td>
<td>740 @ 10MHz</td>
<td>26</td>
<td>2.20</td>
<td>230</td>
<td>Red</td>
</tr>
<tr>
<td>0805AF-153XJ</td>
<td>15 @ 2.5 MHz</td>
<td>17 @ 2.5 MHz</td>
<td>1300 @ 10MHz</td>
<td>20</td>
<td>4.25</td>
<td>150</td>
<td>Yellow</td>
</tr>
<tr>
<td>0805AF-223XJ</td>
<td>22 @ 2.5 MHz</td>
<td>17 @ 2.5 MHz</td>
<td>1620 @ 10MHz</td>
<td>21</td>
<td>6.70</td>
<td>120</td>
<td>Green</td>
</tr>
</tbody>
</table>

1. When ordering, please specify termination and packaging codes:

- **0805AF-103XJ5C**

  Termination: **R** = RoHS compliant matte tin over nickel over silver-platinum-glass frit.
  Special order: **Q** = RoHS tin-silver-copper (95.5/4/0.5) or **P** = non-RoHS tin-lead (63/37).

  Packaging: **C** = 7″ machine-ready reel. EIA-481 embossed plastic tape (2000 parts per full reel).
  **B** = Less than full reel. In tape, but not machine ready.
  To have a leader and trailer added ($25 charge), use code letter C instead.

2. Inductance measured at 0.1 Vrms, using Coilcraft SMD-A fixture in Agilent/HP 4286A impedance analyzer with Coilcraft-provided correlation pieces.

3. **Q** measured on Agilent/HP 4395A with Agilent/HP 16193 test fixture.

4. **SRF** measured using Agilent/HP 8753D network analyzer with Coilcraft SMD-D test fixture.

5. DCR measured on Cambridge Technology Micro-ohmmeter.

6. Current that causes a 15°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. Click for temperature derating information.

7. Each part is marked with a single dot. The color dots are not unique identifiers and correspond to multiple inductance values.

8. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

Designer’s Kit C450 contains 10 of each value

- **Core material**: Ferrite
- **Environmental**: RoHS compliant without exemption, halogen free
- **Terminations**: RoHS compliant matte tin over nickel over silver-platinum-glass frit. Other terminations available at additional cost.
- **Weight**: 16.7 – 18.0 mg
- **Ambient temperature**: –40°C to +85°C with lrm current
- **Maximum part temperature**: +100°C (ambient + temp rise).
- **Storage temperature**: Component: –40°C to +100°C.
  Tape and reel packaging: –40°C to +80°C
- **Resistance to soldering heat**: Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles
- **Moisture Sensitivity Level (MSL)**: 1 (unlimited floor life at <30°C / 85% relative humidity)
- **Failures in Time (FIT) / Mean Time Between Failures (MTBF)**: One per billion hours / one billion hours, calculated per Telcordia SR-332

- **Packaging**: 2000/7″ reel; Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.65 mm pocket depth
- **PCB washing**: Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

- **Inductance measured at 0.1 Vrms, using Coilcraft SMD-A fixture in Agilent/HP 4286A impedance analyzer with Coilcraft-provided correlation pieces.**

- **Q measured on Agilent/HP 4395A with Agilent/HP 16193 test fixture.**

- **SRF measured using Agilent/HP 8753D network analyzer with Coilcraft SMD-D test fixture.**

- **DCR measured on Cambridge Technology Micro-ohmmeter.**

- **Current that causes a 15°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. Click for temperature derating information.**

- **Each part is marked with a single dot. The color dots are not unique identifiers and correspond to multiple inductance values.**

- **Electrical specifications at 25°C.**

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

S-Parameter files on our web site
SPICE models on our web site
Ferrite Chip Inductors – 0805AF Series

Typical L vs Frequency

Typical Q vs Frequency

Typical Impedance vs Frequency

Note: Height dimension (C) is before optional solder application. For maximum height dimension including solder, add 0.006 in / 0.152 mm.