

"High Frequency Ceramic Solutions"

2.45 GHz Filter Balun, conjugate match for MTK and BC05 chipsets

P/N 2450FB15M0001

Detail Specification: 12/03/2009

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General Specifications

| | |
|-----------------------------|---|
| Part Number | 2450FB15M0001 |
| Frequency (MHz) | 2400~2500 |
| Unbalanced Impedance | 50 Ω |
| Balanced Impedance | Conjugate match to MTK and BC05 chipset |
| Insertion Loss | 3 dB max. |
| Return Loss | 9.5 dB min. |
| Phase Difference | 180° \pm 15 |
| Amplitude Difference | 2.0 dB max. |

| | |
|------------------------------|--|
| Attenuation (dB) | 40 min.@ 880~960MHz |
| | 35 min.@1710~1880 MHz |
| | 25 min.@1880~1990MHz |
| | 35 min.@4800~5000MHz |
| | 25 min.@7200~7500MHz |
| Operating Temperature | -40 to +85°C |
| Storage Temperature | +5 to +35°C, Humidity: 45-75%RH, 12 mos. Max |
| Input Power | 1 Watt max. |
| Reel Quantity | 4,000 |

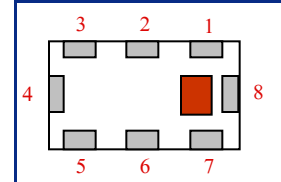
Mechanical Dimensions

| | In | mm |
|----------|--------------------|-----------------|
| L | 0.079 \pm 0.008 | 2.00 \pm 0.20 |
| W | 0.049 \pm 0.008 | 1.25 \pm 0.20 |
| T | 0.028 \pm 0.004 | 0.70 \pm 0.10 |
| a | 0.012 \pm 0.004 | 0.30 \pm 0.10 |
| b | 0.008 \pm 0.004 | 0.20 \pm 0.10 |
| c | 0.012 +.004/-0.008 | 0.30 +0.1/-0.2 |
| g | 0.014 \pm 0.004 | 0.35 \pm 0.10 |
| p | 0.026 \pm 0.002 | 0.65 \pm 0.05 |

Case size/type 43-3

Terminal Configuration

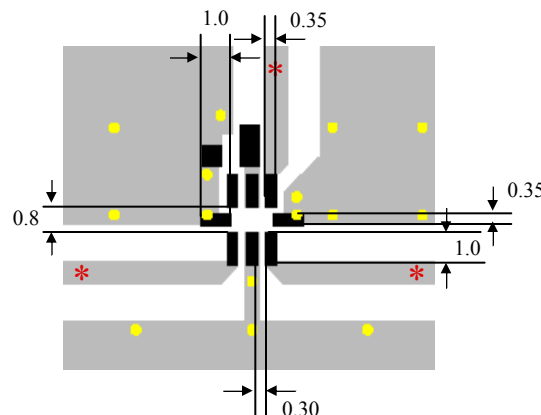
| No. | Function |
|----------|-----------------|
| 1 | Unbalanced Port |
| 2 | NC or DC Feed |
| 3 | NC |
| 4 | GND |
| 5 | Balanced Port |
| 6 | GND |
| 7 | Balanced Port |
| 8 | GND |



Mounting Considerations

* Line width should be designed to match 50 Ω characteristic impedance, depending on PCB material and thickness.

** By-pass capacitor should be connected when feeding DC power



Units: mm

- Solder Resist
- Land
- Through-hole (ϕ 0.3)

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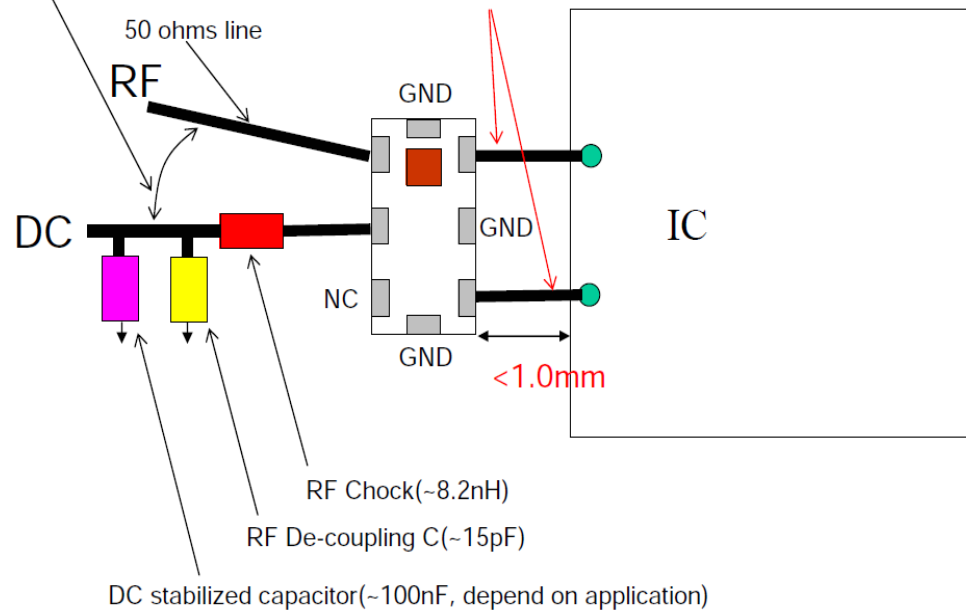
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Technical Note for DC Feed

To avoid RF signal coupled to VCO via DC line, it is better to have larger spacing between RF and DC lines

1. Keep the same width and length for these two lines, and the length should be designed less than 1.0mm.
2. Line impedance is about 40-60 ohms. The main concern is convenience to layout.



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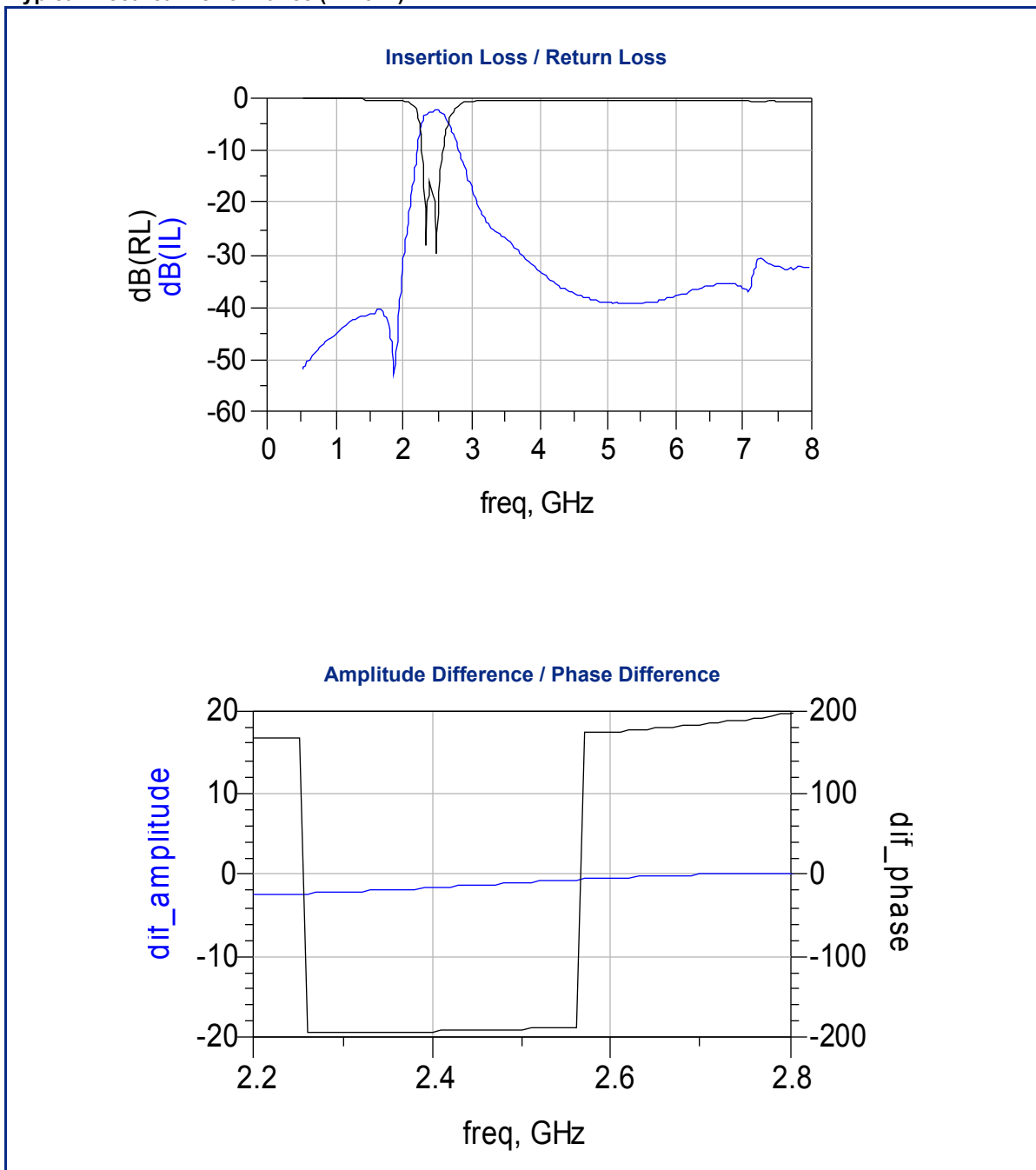
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Typical Electrical Performance (T=25°C)



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