

# "High Frequency Ceramic Solutions"

**2.45 GHz Impedance matched Balun-Filter for Texas Instruments' CC2500, CC2510, and CC2511 Chipsets**

**P/N 2450BM15B0003**

Detail Specification: 9/12/2012

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## General Specifications

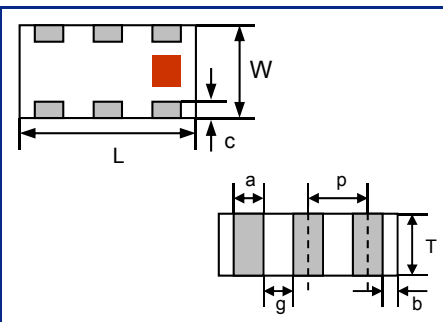
<b>Part Number</b>	2450BM15B0003
<b>Frequency (MHz)</b>	2400~2500
<b>Unbalanced Impedance</b>	50 Ω
<b>Differential Balanced Impedance</b>	Conjugate match to TI CC2500, CC2510, CC2511 chipsets
<b>Insertion Loss</b>	2.2 dB max. 1.7dB typ
<b>Return Loss</b>	10 dB min.
<b>Phase Difference</b>	180° ± 12
<b>Amplitude Difference</b>	2.0 dB max.

<b>Differential Mode Attenuation (dB)</b>	20 min.@ 4800~5000MHz 20 min.@ 7200~7500MHz
<b>Common Mode Attenuation (dB)</b>	17 min.@ 4800~5000MHz
<b>Operating Temperature</b>	-40°C to +125°C
<b>Recommended Storage Conditions</b>	+5 to +35°C, Humidity: 45-75%RH, 12 mos. Max
<b>Input Power</b>	2 Watts max.
<b>Reel Quantity</b>	4,000

\* 18 months in vacuum sealed bag and 1 week after opened. For more info go to [www.johansontechnology.com/silverleads](http://www.johansontechnology.com/silverleads)

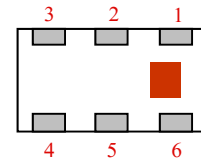
## Mechanical Dimensions

	In	mm
<b>L</b>	0.079 ± 0.004	2.00 ± 0.10
<b>W</b>	0.049 ± 0.004	1.25 ± 0.10
<b>T</b>	0.031 ± 0.004	0.80 ± 0.10
<b>a</b>	0.012 ± 0.004	0.30 ± 0.10
<b>b</b>	0.008 ± 0.004	0.20 ± 0.10
<b>c</b>	0.012 +.004/- .008	0.30 +0.1/-0.2
<b>g</b>	0.014 ± 0.004	0.35 ± 0.10
<b>p</b>	0.026 ± 0.002	0.65 ± 0.05



## Terminal Configuration

No.	Function
1	Unbalanced Port
2	DC Feed + RF GND
3	Balanced Port
4	Balanced Port
5	GND
6	GND



## Mounting Considerations

Units: mm

0402 22pF RF GND cap Johanson p/n: 500R07S220JV4

Johanson Chip Inductor p/n L-07C10NJV6 (EIA 0402)

CC2500

0.8

0.8

0.18

0.35

0.30

Legend:

- Grey square: Solder Resist
- Black square: Land
- Yellow circle: Through-hole (φ 0.3)

\* Line width should be designed to match 50 W characteristic impedance, depending on PCB material and thickness.  
- Go to page 2 for a more detailed layout

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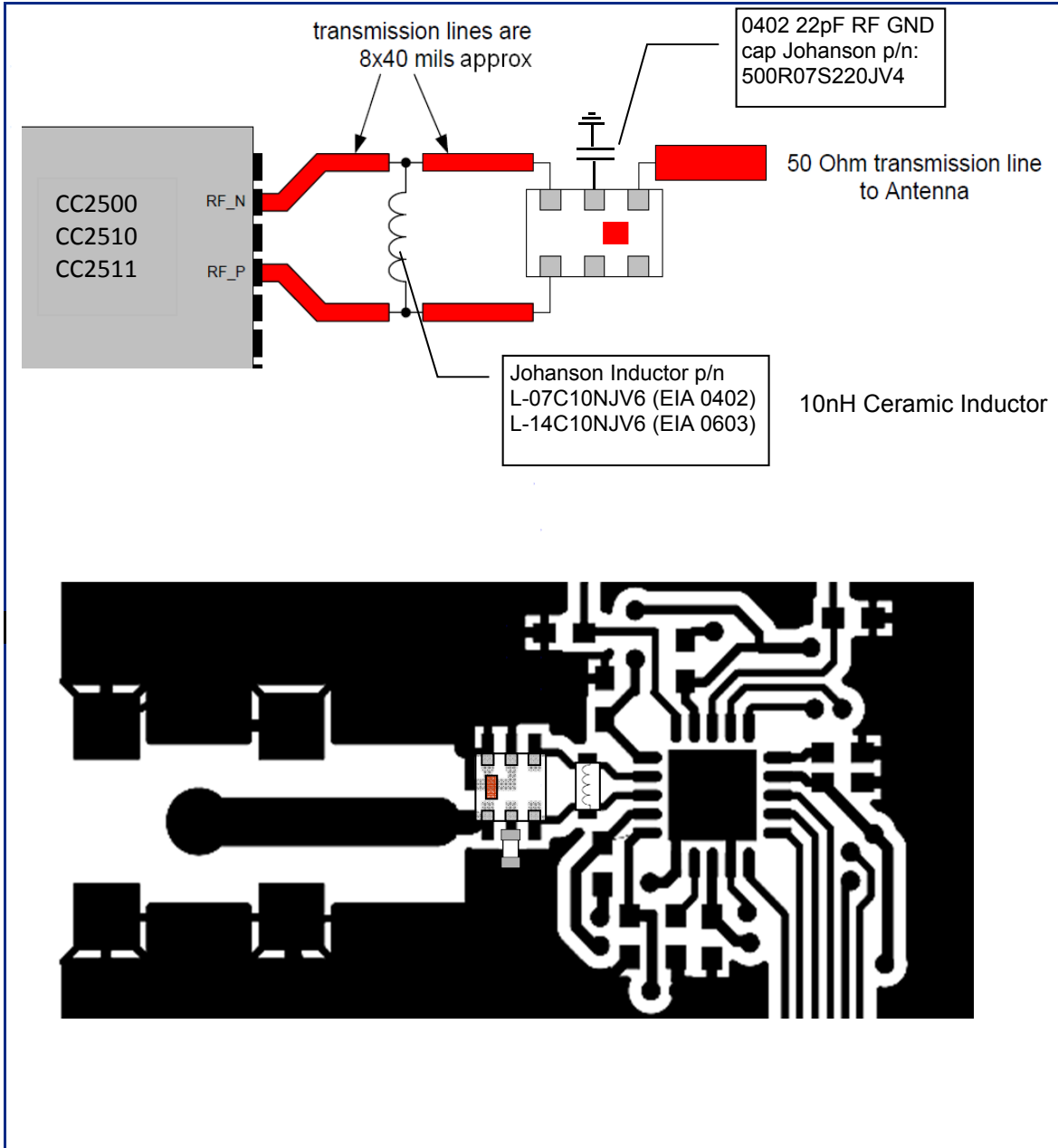
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## Recommended Layout



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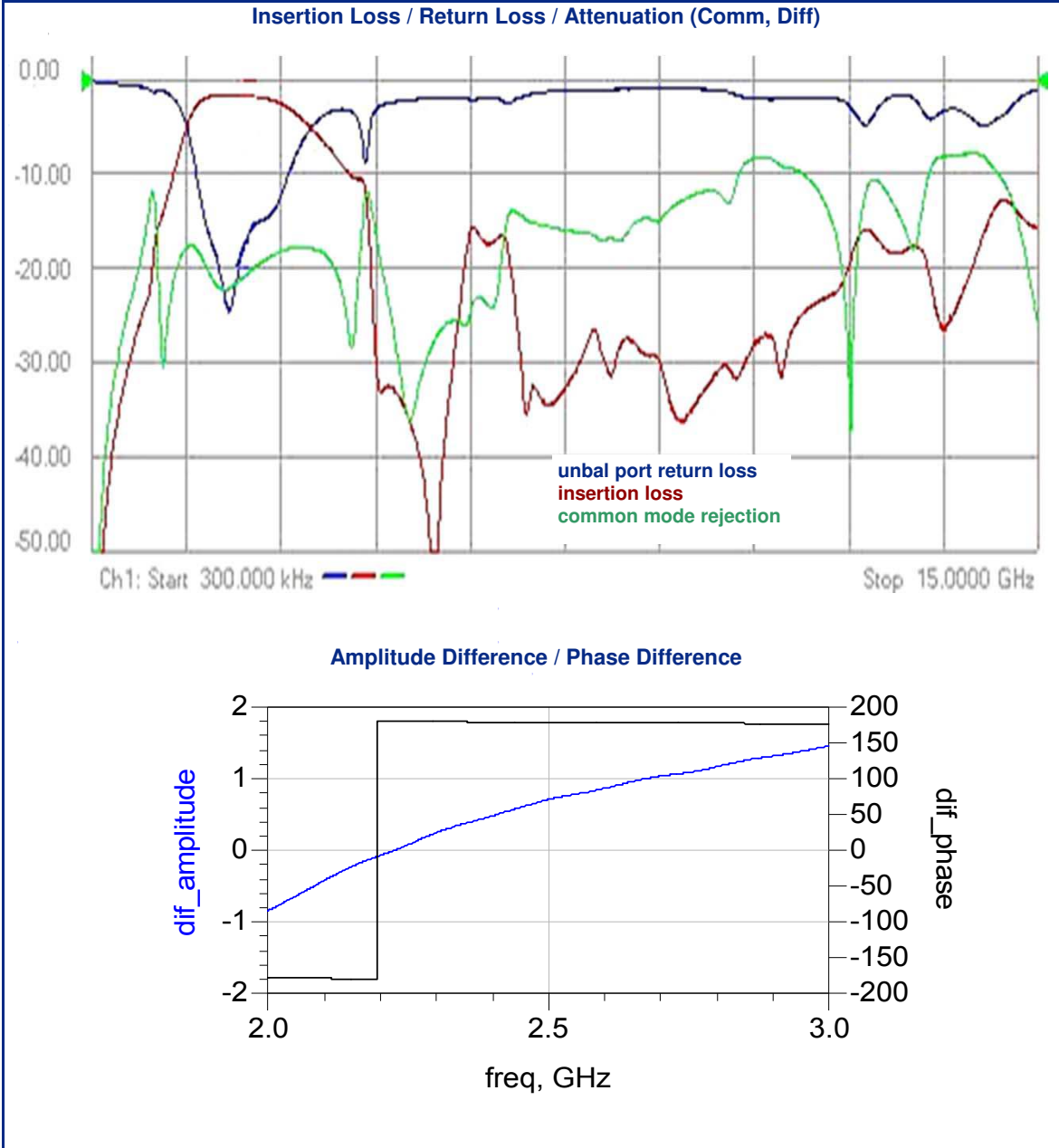
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## Typical Electrical Performance (T=25°C)



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