

# High Frequency Ceramic Solutions

**2.45 GHz Impedance Matched Balun-BPF: For TI CC253X, CC254X, CC257X, CC853X and CC852X Chipset family**

**P/N 2450BM15A0002**

Detail Specification: 4/29/2013

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General Specifications	
Part Number	2450BM15A0002
Frequency (MHz)	2400 - 2500
Unbalanced Impedance	50 $\Omega$
Balanced Differential Impedance	Impedance match to T.I. CC253X, CC254X, CC257X, CC853X and CC852X Chipsets
Insertion Loss	1.5 dB max. (-40°C to +85°C)
Insertion Loss	1.7 dB max. (-40°C to +125°C)
Return Loss (-40°C to 125°C)	9.5 dB min.

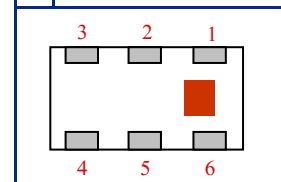
Differential Mode Attenuation (dB) -40°C to 125°C	12 min. @ 1GHz 18 min. @ 4800~5000MHz 20 min. @ 7200~7500MHz
Phase Diff. (-40°C to 125°C)	180° $\pm$ 15
Input Power	2W max.
Reel Quantity	4,000
Operating Temperature	-40°C to +125°C
Recommended Storage Conditions	+5 ~ +35 °C, Humidity 45~75%RH, 18 mos. max

## Part Number Explanation

P/N	Packaging Style	Bulk	Suffix = S	Eg. 2450BM15A0002S
		T & R	Suffix = E	Eg. 2450BM15A0002E
Suffix	Termination Style	100% Tin	Suffix = None	Eg. 2450BM15A0002(E or S)
	Evaluation Board	2450BM15A0002-EBSMA		

## Terminal Configuration

No.	Function
1	Unbalanced Port
2	GND
3	Balanced Port
4	Balanced Port
5	GND
6	GND



## Mechanical Dimensions

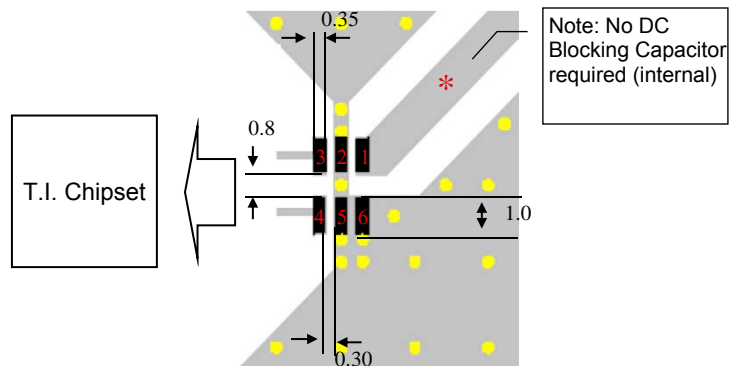
	In	mm
L	0.079 $\pm$ 0.004	2.00 $\pm$ 0.10
W	0.049 $\pm$ 0.004	1.25 $\pm$ 0.10
T	0.028 $\pm$ 0.004	0.70 $\pm$ 0.10
a	0.012 $\pm$ 0.004	0.30 $\pm$ 0.10
b	0.008 $\pm$ 0.004	0.20 $\pm$ 0.10
c	0.012 +.004/-0.008	0.30 +0.1/-0.2
g	0.014 $\pm$ 0.004	0.35 $\pm$ 0.10
p	0.026 $\pm$ 0.002	0.65 $\pm$ 0.05

## Mounting Considerations

Mount these devices with brown mark facing up. Units: mm

\* Line width should be designed to provide 50  $\Omega$  impedance matching characteristics.

- Solder Resist
- Land
- Through-hole ( $\phi$ 0.3)



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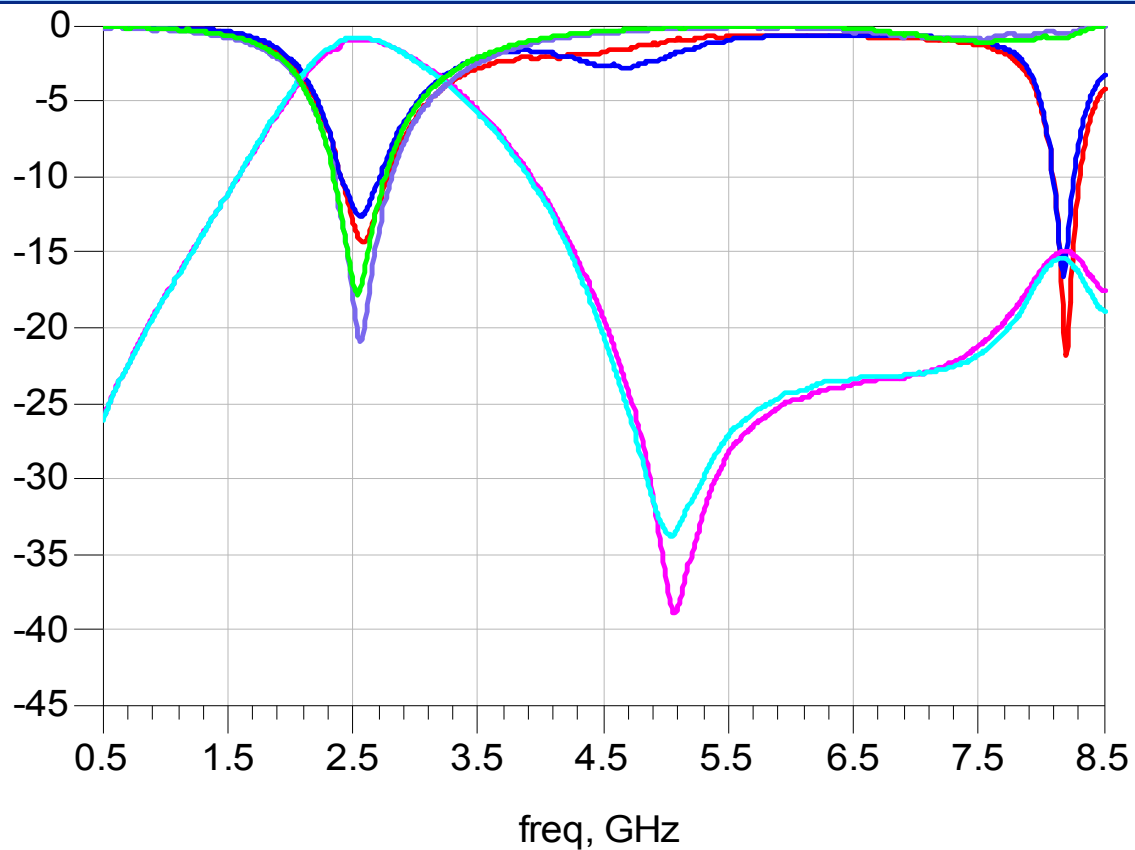
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## Typical Electrical Performance at 25°C and 125°C



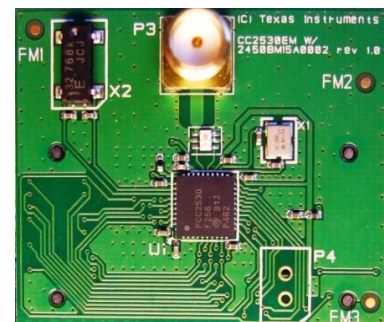
25°C Unbalanced RL      25°C Balanced Return Loss      25°C Insertion Loss/Attenuation (Differential Mode)

125°C Unbalanced RL      125°C Balanced Return Loss      125°C Insertion Loss/Attenuation (Differential Mode)

## Technical notes and Reference Designs

Technical Note:  
[www.johansontechnology.com/CC2530AppNote](http://www.johansontechnology.com/CC2530AppNote)

Gerber Files and TI Reference Notes:  
<http://www.ti.com/tool/cc2530balun-refdes>



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