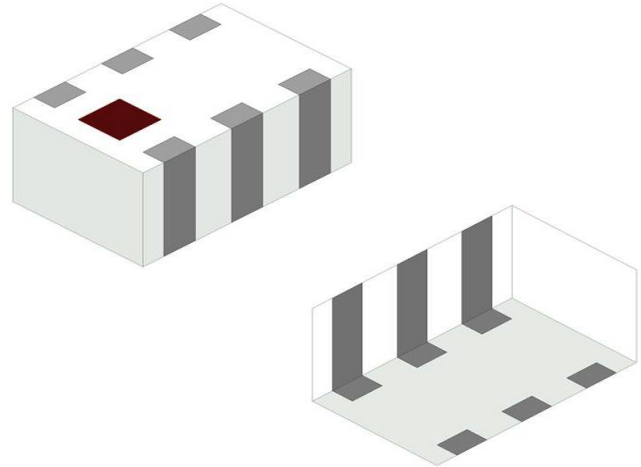


2.45 GHz Impedance Matched Balun-Filter for Texas Instruments CC253X, CC254X, CC257X, CC852X, and CC853X Chipset Families

- Operating temperature up to 125°C (non-automotive)
- SMD, EIA 0805
- Designed for use with Texas Instruments chipset part numbers:
 - CC2540, CC2531, CC2533, CC2538
 - CC2540, CC2541, CC2543, CC2544
 - CC2570, CC2571
 - CC8520, CC8521
 - CC8530, CC8531



General Specifications¹

Passband Frequency (MHz)	2400 – 2500
Unbalanced Impedance (Ω)	50
Balanced Differential Impedance (Ω)	Impedance match to TI CC253X, CC254X, CC257X, CC852X and CC853X chipsets
Insertion Loss (dB)	1.5 Max. (-40°C to +85°C) 1.7 Max. (-40°C to +125°C)
Return Loss (dB)	9.5 Min.
Phase Difference (degree)	180 \pm 15
Differential Mode Attenuation	
Frequency Range (MHz) Attenuation (dB)	1000 12 Min.
Frequency Range (MHz) Attenuation (dB)	4800 – 5000 18 Min.
Frequency Range (MHz) Attenuation (dB)	7200 – 7500 20 Min.

¹ Typical value represents average measurement at 25°C. Min./Max. values represent measurements within the operating temperature specification unless stated otherwise.

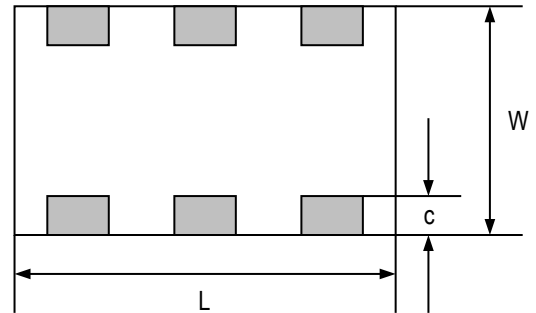
Maximum Ratings

Power Capacity (W)	2 Max. (CW)
Operating Temperature (°C)	-40 to +125
Recommended Storage Conditions post-installation (°C)	-40 to +125
Recommended Storage Conditions and Period for Unused T&R Product	45% - 75% RH +5 to +35 °C 18 Months Max.

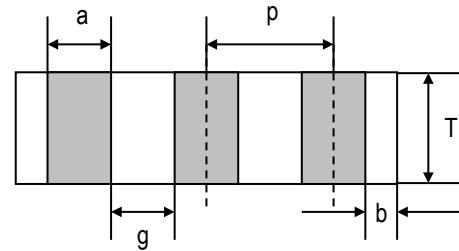
Mechanical Dimensions

	Inches			Millimeters		
L	0.079	± 0.004		2.00	± 0.10	
W	0.049	± 0.004		1.25	± 0.10	
T	0.028	± 0.004		0.70	± 0.10	
a	0.012	± 0.004		0.30	± 0.10	
b	0.008	± 0.004		0.20	± 0.10	
c	0.012	+0.004/-0.008		0.30	+0.10/-0.20	
g	0.014	± 0.004		0.35	± 0.10	
p	0.026	± 0.002		0.65	± 0.05	

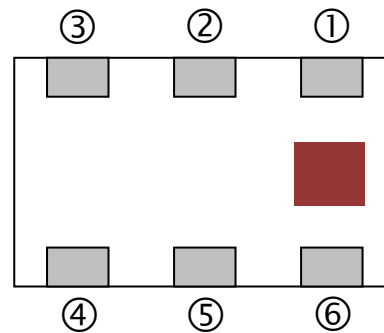
Bottom view



Side view



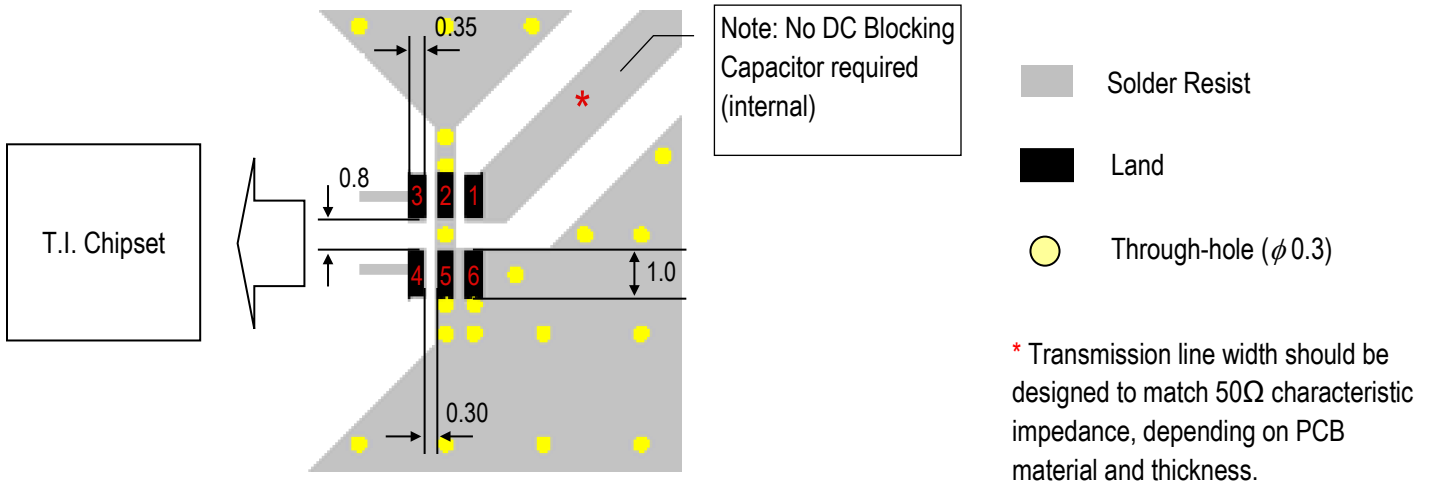
Top view



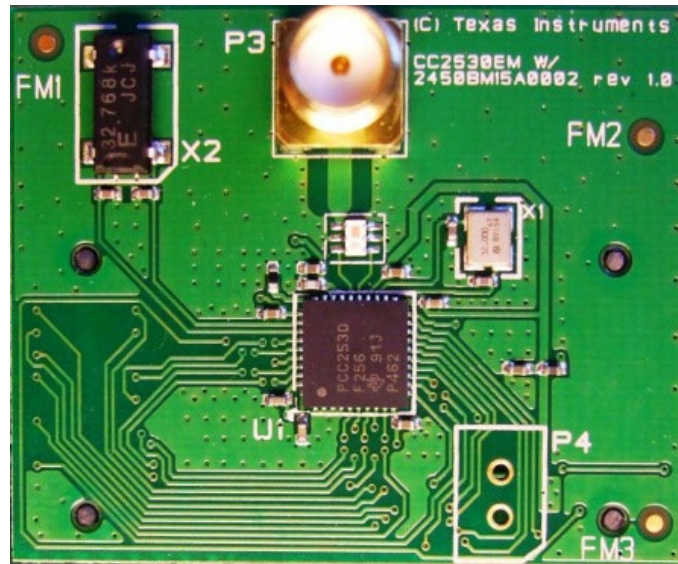
Terminal Configuration

Pin Number	Function
1	Unbalanced Port
2	GND
3	Balanced Port
4	Balanced Port
5	GND
6	GND

PCB Layout



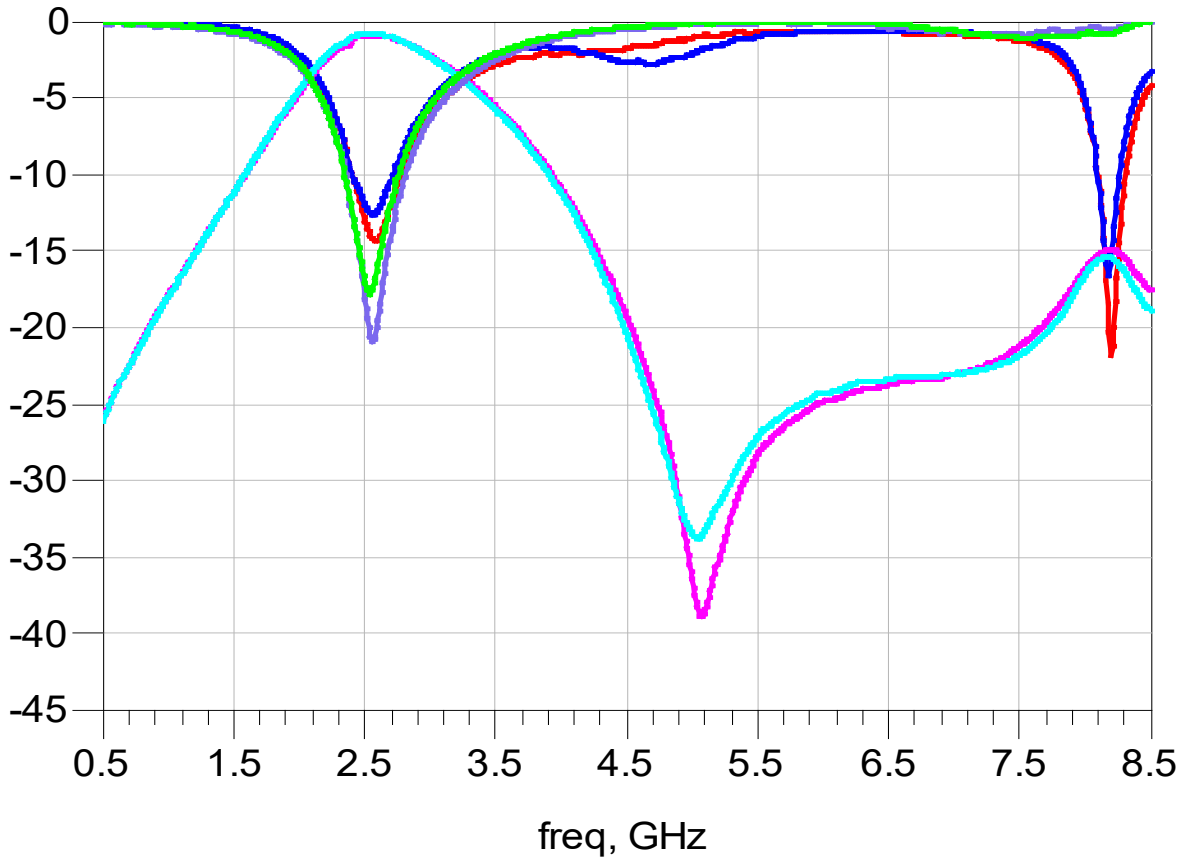
PCB Reference Design



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

If you would like the full reference design package or have any questions, contact our application engineers at <https://www.johansontechnology.com/ask-a-question>

RF Measurement

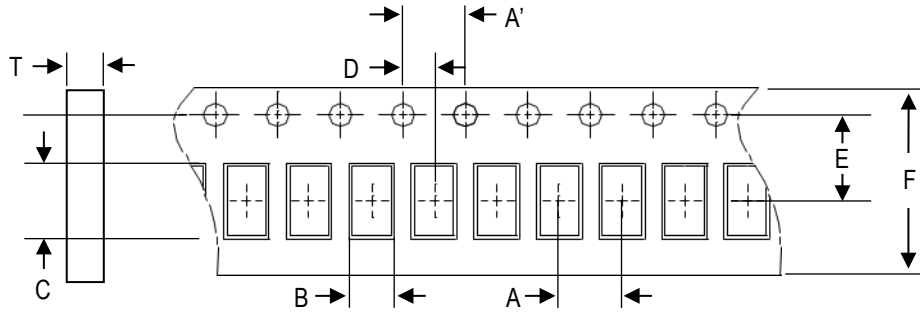


25°C Unbalanced RL	25°C Balanced Return Loss	25°C Insertion Loss/Attenuation (Differential Mode)
125°C Unbalanced RL	125°C Balanced Return Loss	125°C Insertion Loss/Attenuation (Differential Mode)

S-parameter and layout file available upon request. Please contact <https://www.johansontechnology.com/ask-a-question>

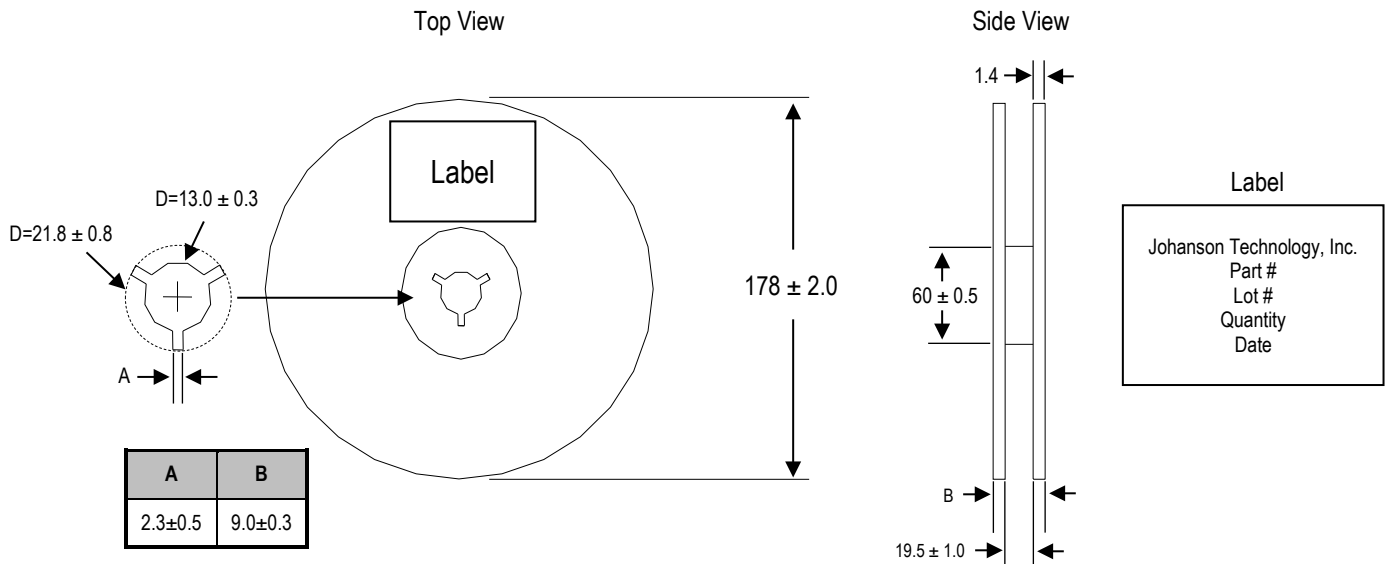
Tape and Reel Specification (Units in mm)

Tape Dimensions

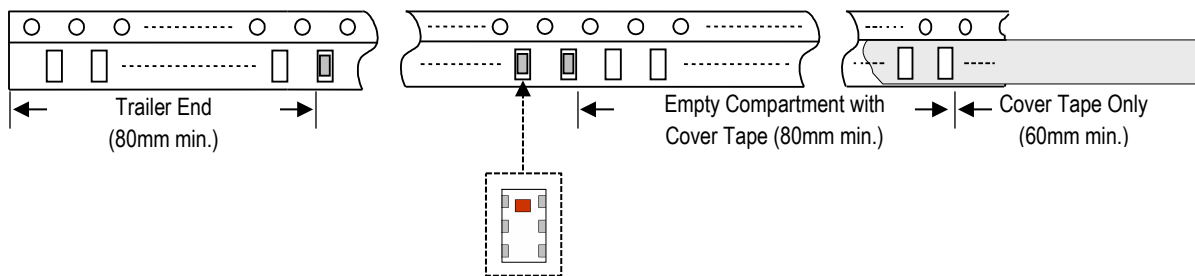


A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
4.0±0.1	4.0±0.1	1.35±0.05	2.15±0.05	2.0±0.05	3.5±0.1	8.0±0.1	1.00±0.05	4,000pcs	Plastic (Embossed)

Reel Dimensions



Leader and Trailer Dimensions



Orderable Part Number

Packaging Style	Part Number
Bulk (loose pcs.)	2450BM15A0002001B
T & R (7" Reel Embossed Tape)	2450BM15A0002001E (Qty: 4,000 pcs./reel)

Important Links

[2450BM15A0002001E Product Page](#)

[2.4GHz Antennas](#)

[Antenna Tuning, Optimization, and Validation Services](#)

[Soldering Information](#)

[MSL Information](#)

[Packaging Information](#)

[Recommended Storage Condition and Max Shelf Life](#)

[RoHS Compliance](#)