



BroadBand Surface Mount (SMT) 2-Way RF Splitter/Combiner

Features:

- BroadBand 0.5 to 7 GHz Operation
- Low Loss (<0.7 dB at 6 GHz)
- Excellent Amplitude/Phase Balance to 6 GHz (+/- 0.1 dB, +/- 1°)
- High Power (>20 watts as splitter)
- RoHs Compliant

Datasheet Model Number: [BBTLine_2Way_SMT](#)

Description: Shown below is a patented (U.S. Patent 9,570,792) broadband 2-way surface mount (SMT) RF Splitter/Combiner. This RF splitter is not a typical Wilkinson device, but a design which yields a more compact splitter/combiner with excellent low loss RF characteristics and high power handling capability.

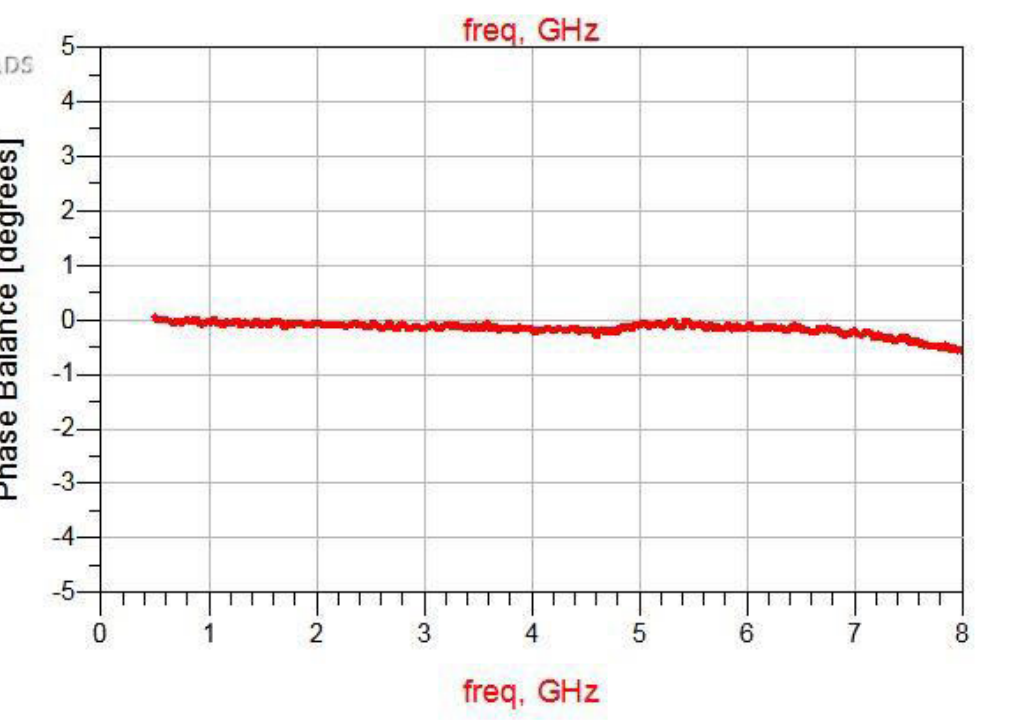
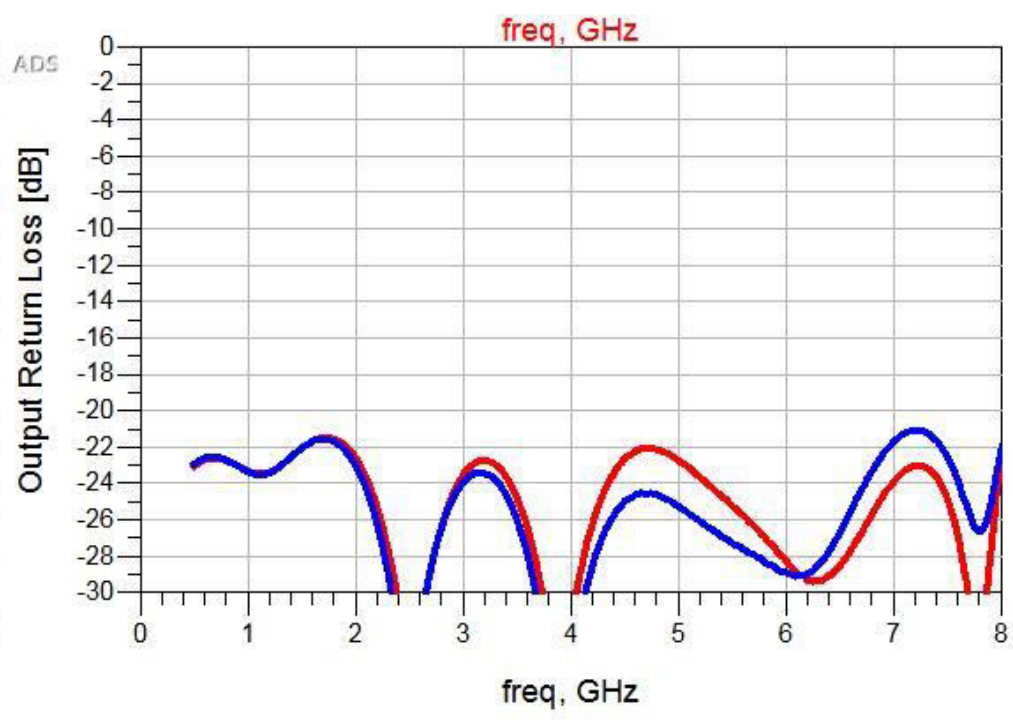
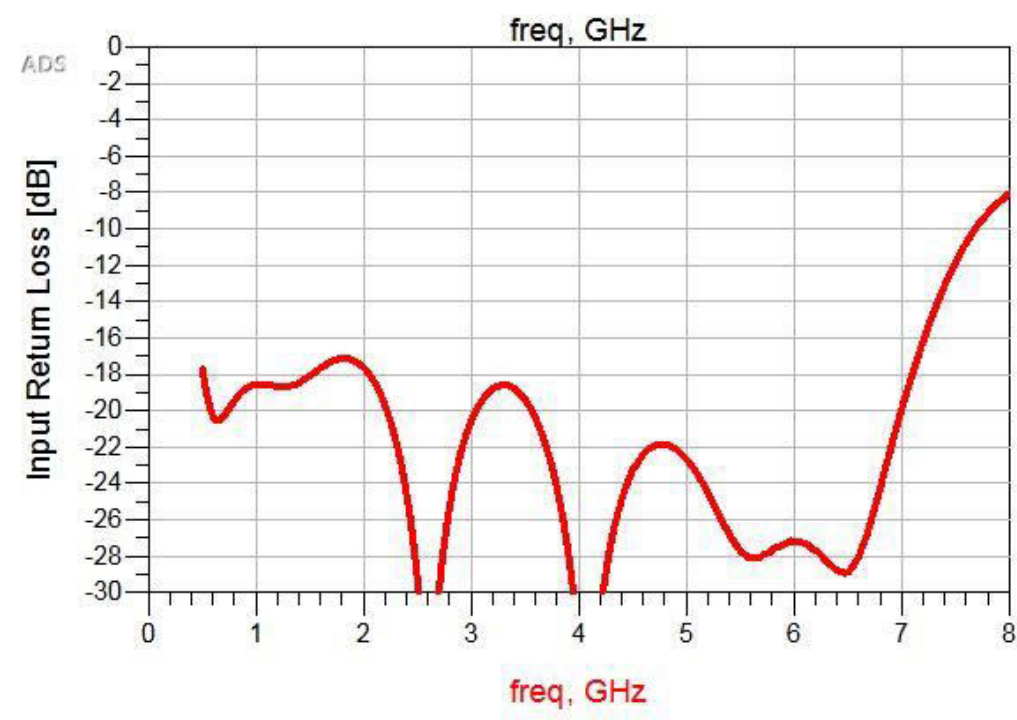
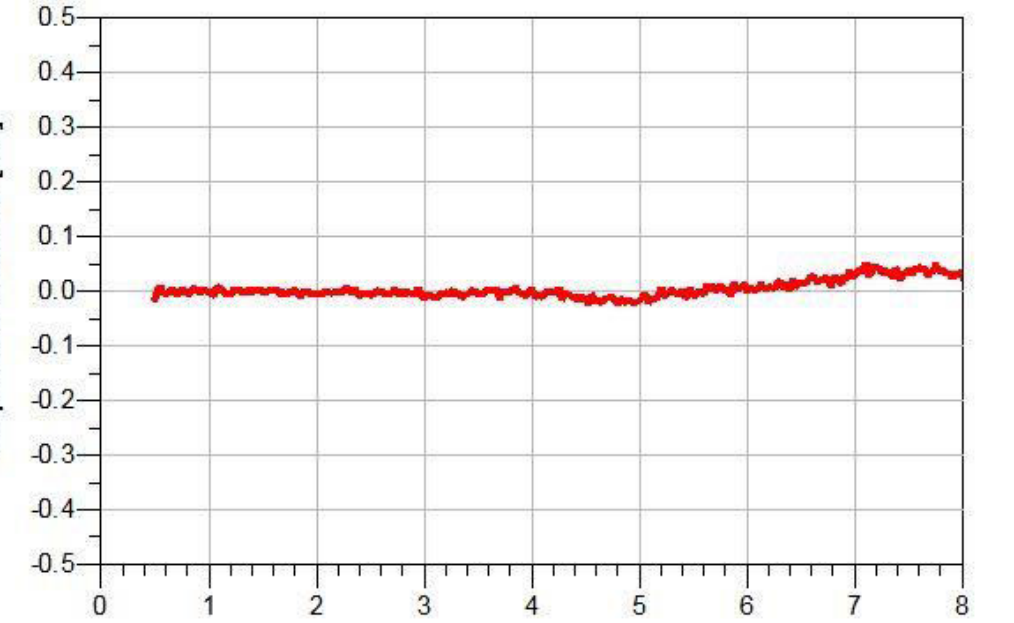
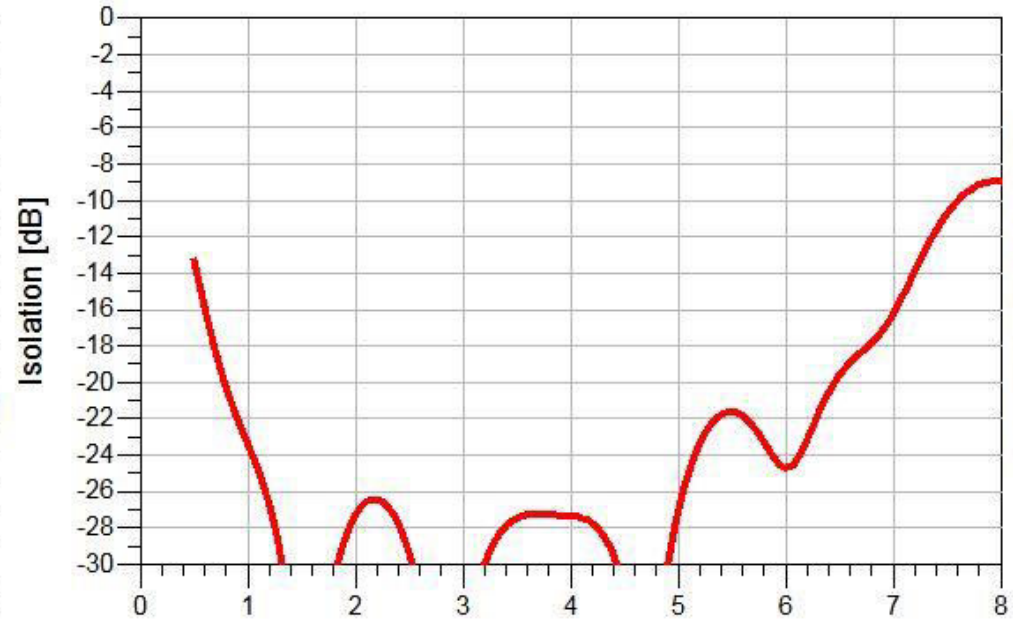
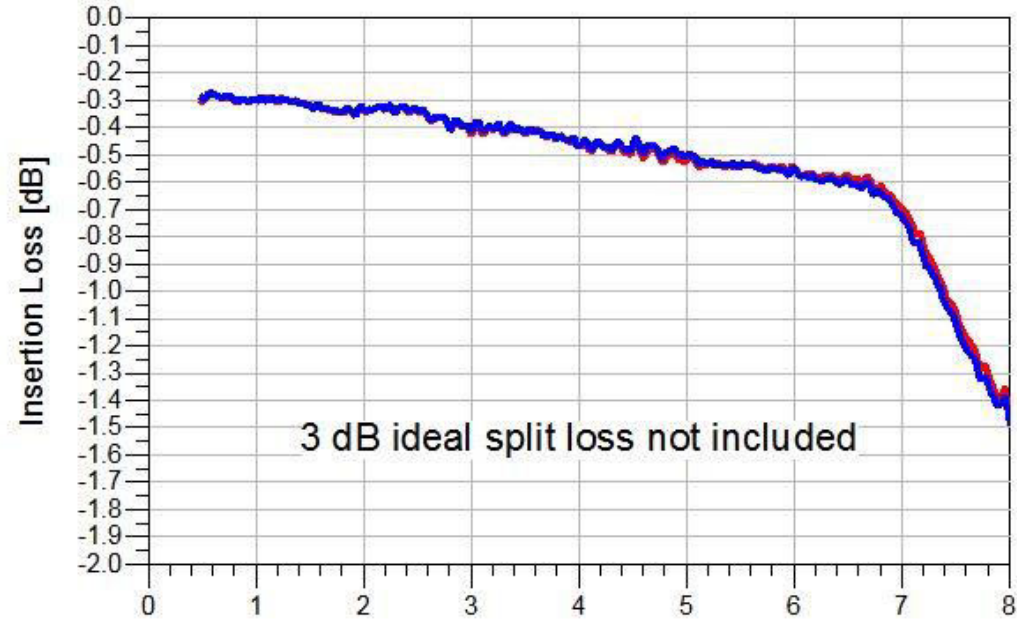


RF Specifications:

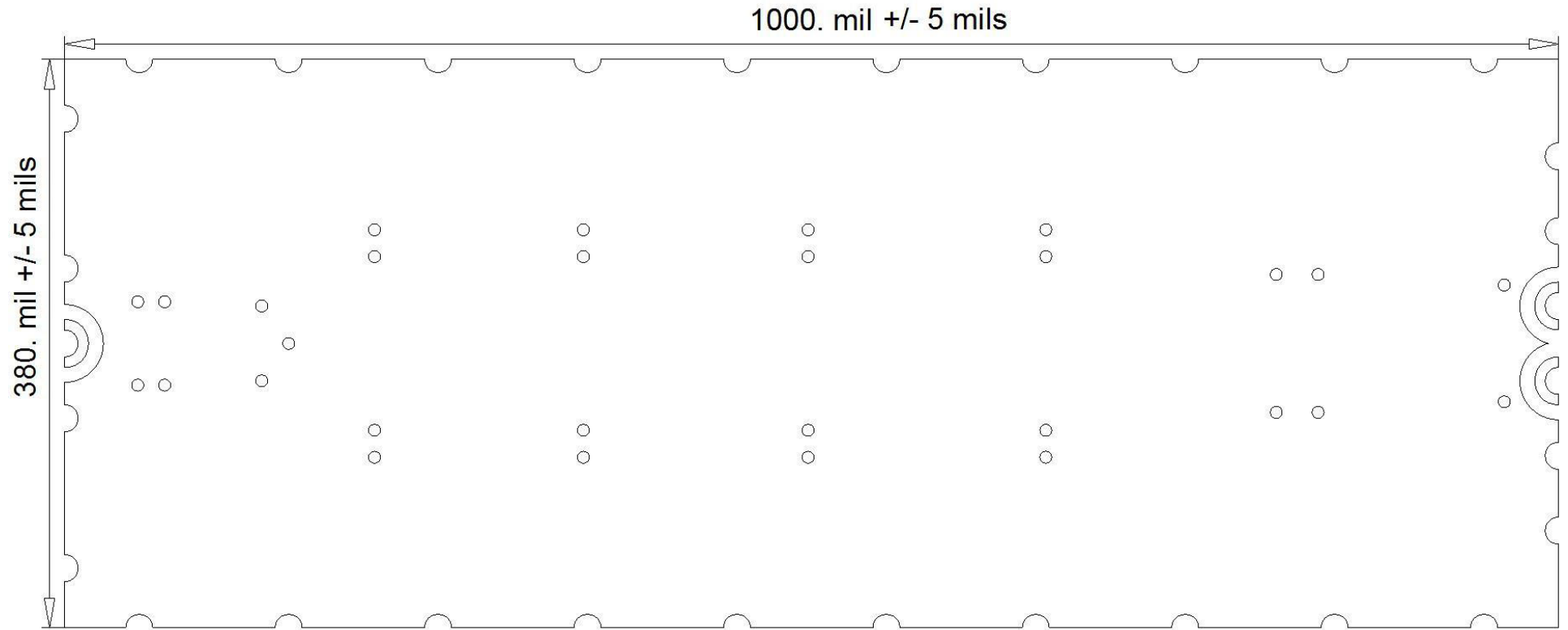
Specifications (at Room Temperature):	
Frequency Range [GHz]	0.5 to 7
Insertion Loss @ 6 GHz [dB]	< 0.7
Isolation [dB] (0.5 to < 0.8 GHz)	> 12
Isolation [dB] (0.8 to 6.4 GHz)	> 20
Isolation [dB] (> 6.4 to 7 GHz)	> 14
Input (Common Port) Return Loss [dB]	< -17
Output Return Loss [dB]	< -18
Maximum Power as Splitter [Watts]	> 20*
Maximum Power as Combiner [Watts], In-Phase signals	> 20*
Maximum Power as Combiner [mWatts], Anti-Phase signals	= 50 **
Phase Unbalance to 6 GHz [degrees]	+/- 1.0
Amplitude Unbalance to 6 GHz [dB]	+/- 0.1
Operating Temperature Range [degrees C]	-55 to 125
Mass [grams]	< 1.1
* 20 watts is a test setup limitation NOT a device limitation (CW frequency of 3.55 GHz)	
** internal 0201 isolation resistor limitation when combining perfectly Anti-Phase signals	

Typical Device RF Performance:

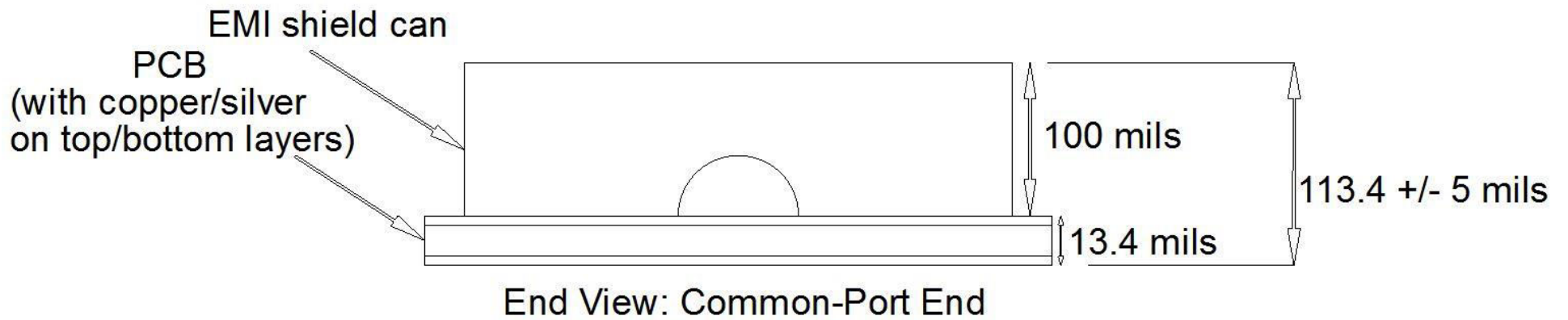
device = #47, 10/4/17



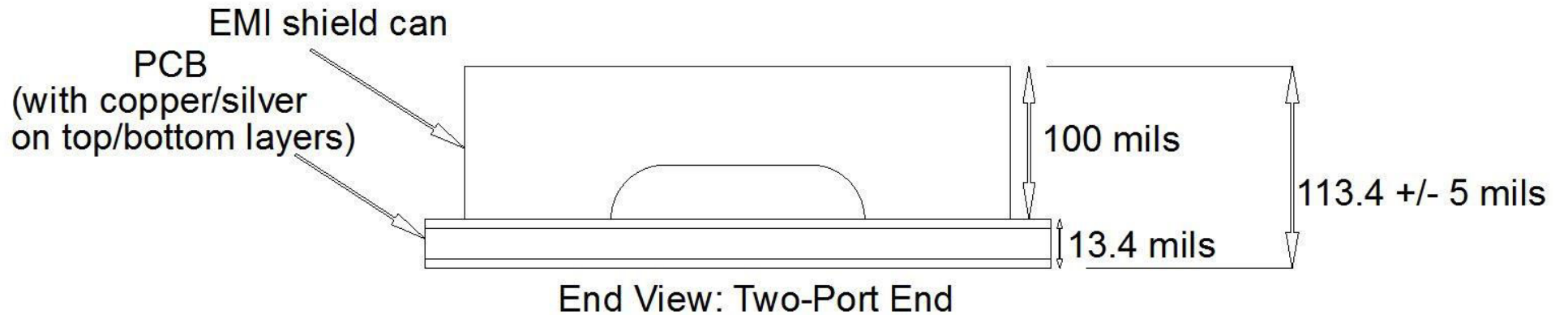
Mechanical Dimensions, Bottom View:



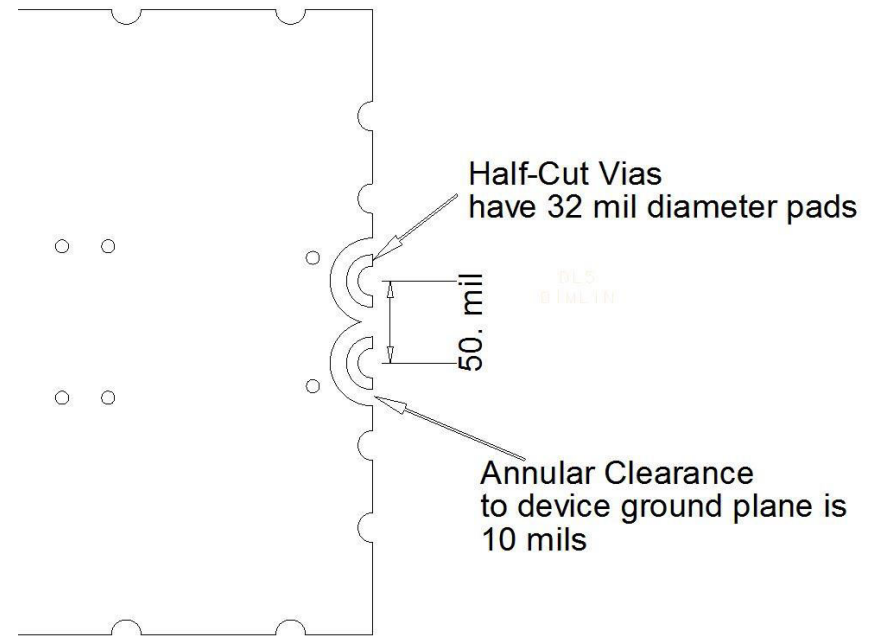
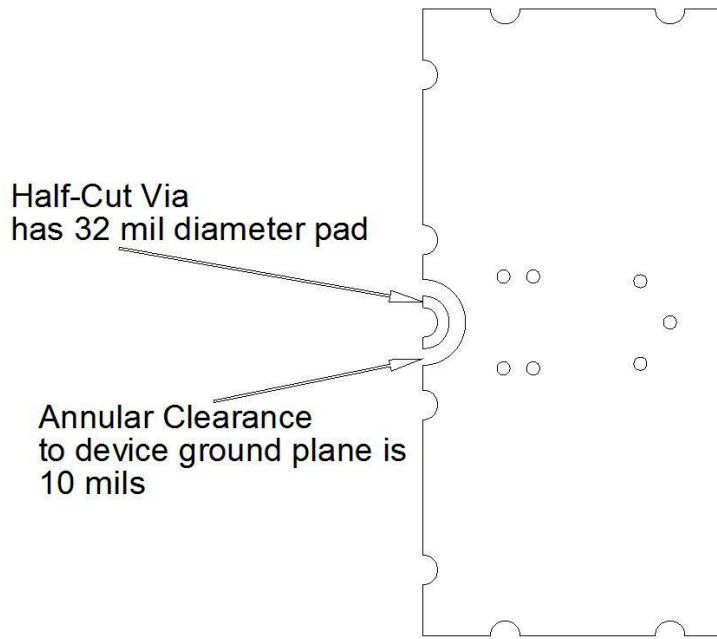
Mechanical Dimensions, Common Port End View (board vias are not shown):



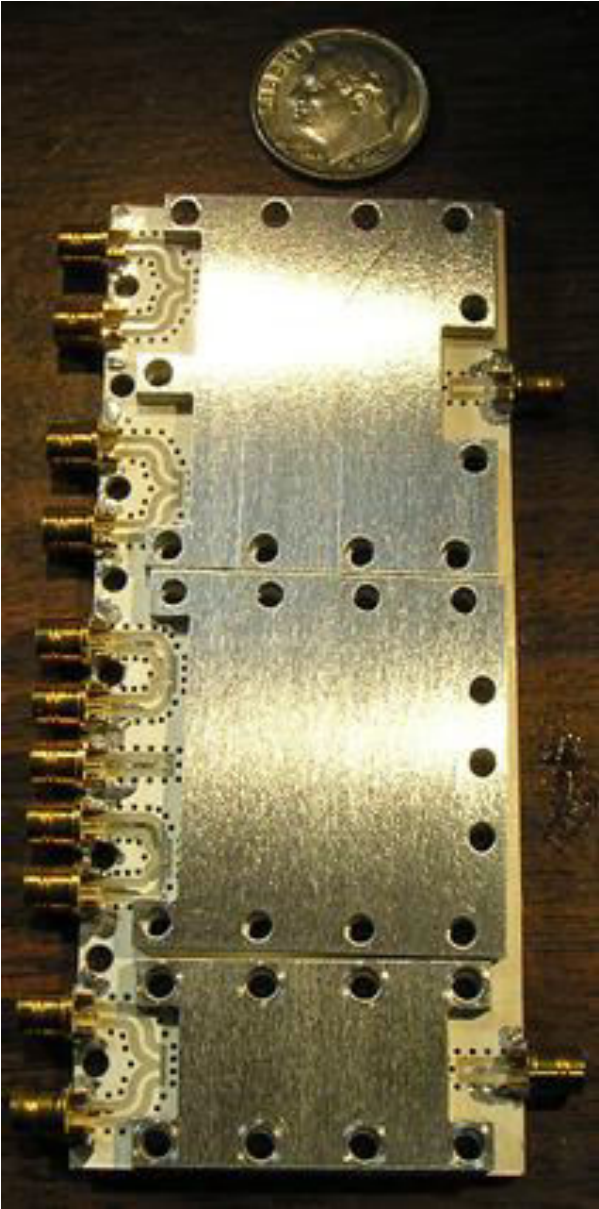
Mechanical Dimensions, Two-Port End View (board vias are not shown):



Mechanical Dimensions, Zoom-In On Device Signal Via Details:



An Evaluation Board with Male SMP Smooth-Bore connectors is available:



BroadBand Transmission Line, BBTLine, LLC. 10907 NE 133rd St., Kirkland, WA 98034. 425-273-3712. www.bbt-line.com