



[4-Way RF Power Divider - Version 2 - Surface Mount - Broadband](#)

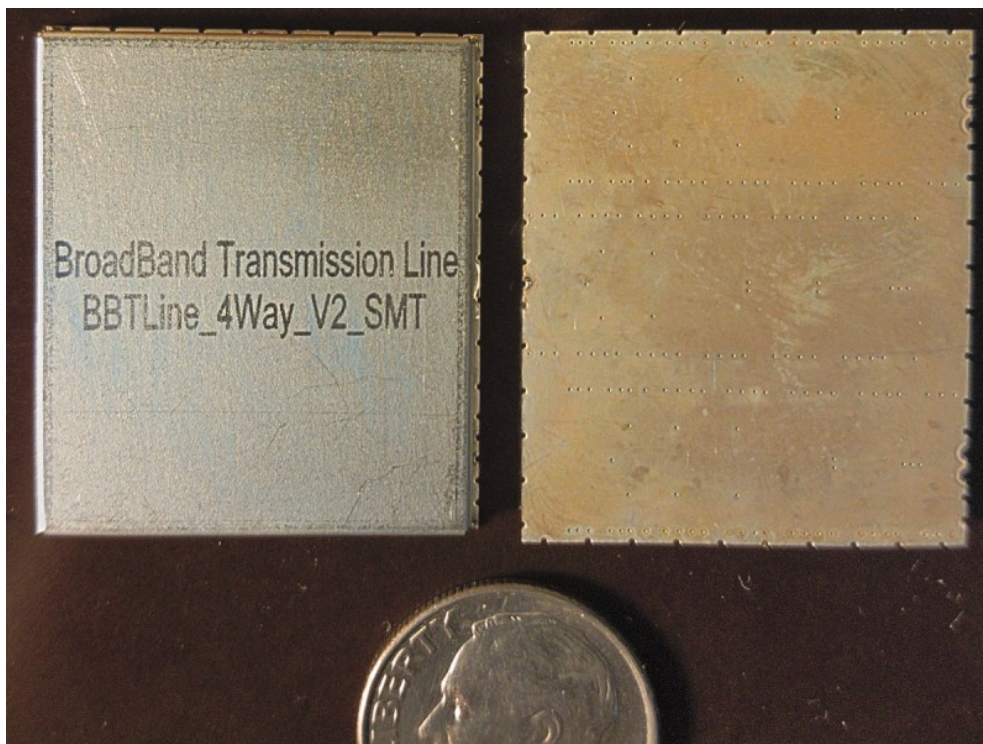
Splitter Features:

- BroadBand 0.5 GHz to 7 GHz
- Low Loss (Less Than 1.4 dB at 6 GHz)
- Excellent Amplitude/Phase Balance - 0.15 dB/2.5 Degrees @ 6 GHz
- High Power (Greater Than 20 Watts As A Splitter)
- RoHs Compliant

Datasheet Part Number = [BBTLine_4Way_V2_SMT](#)

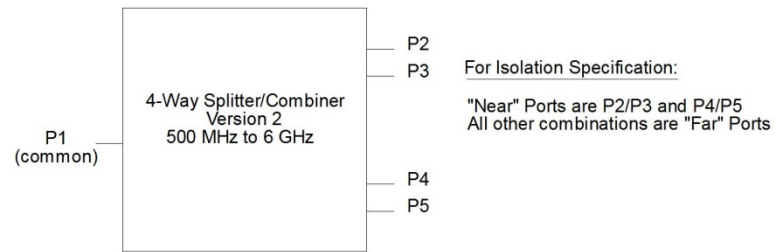
Note: "Version 2" has the common port on one side of the device and the other four ports opposite.

Description: Shown below is a patented (U.S. Patent 9,570,792) broadband 4-way RF Surface Mount (SMT) RF Splitter/Combiner. This RF splitter is not a typical Wilkinson-style device, but a design which yields a more compact Splitter/Combiner with excellent low loss RF characteristics and high handling power capability.



RF Specifications:

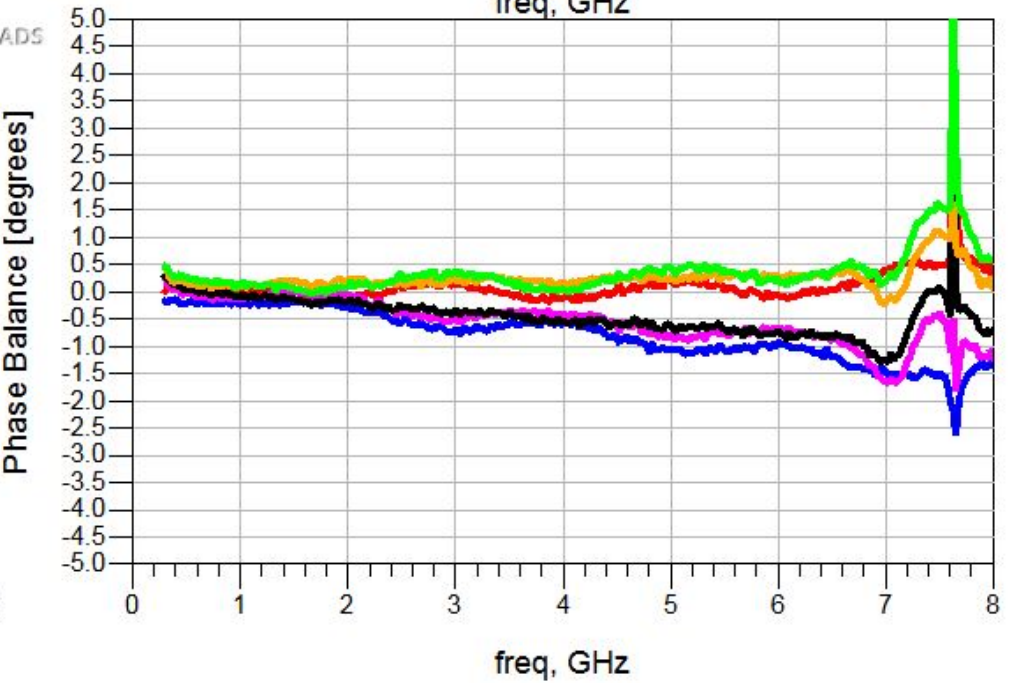
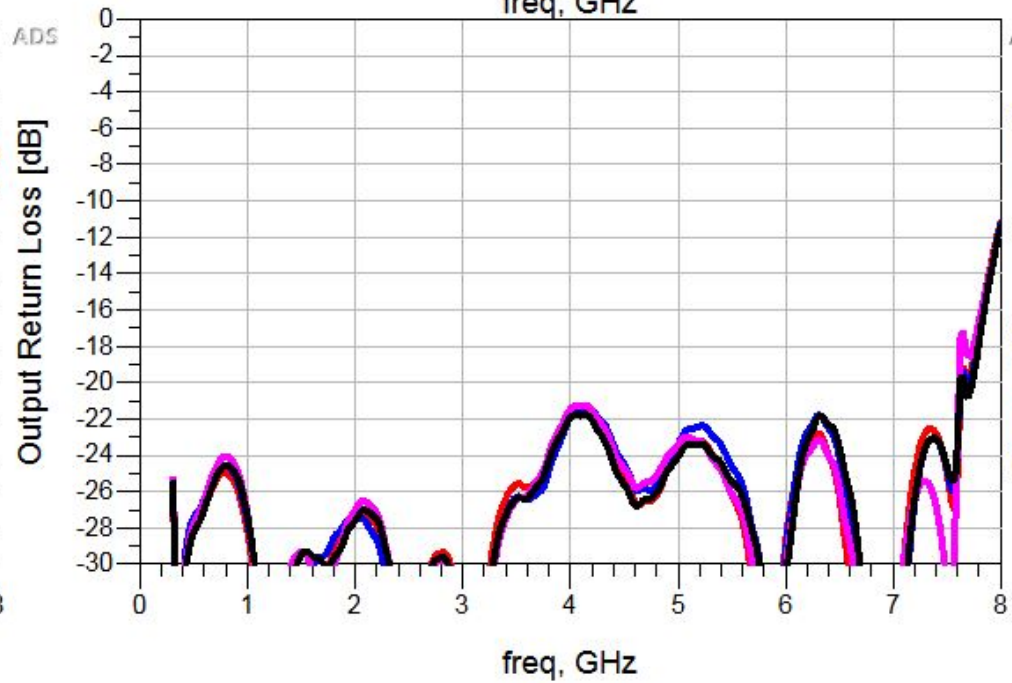
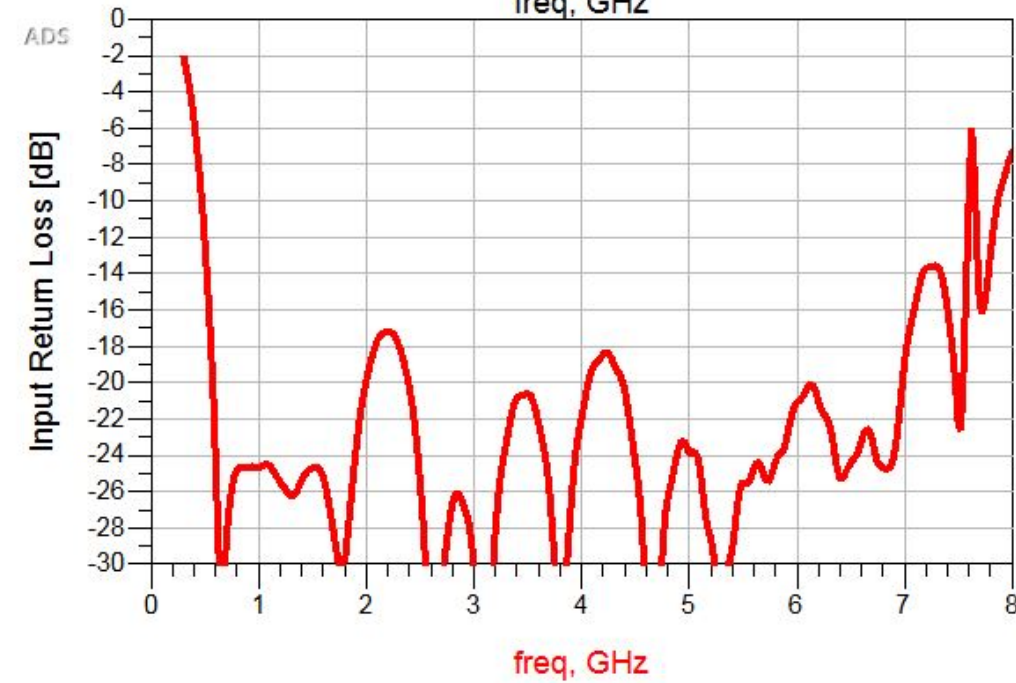
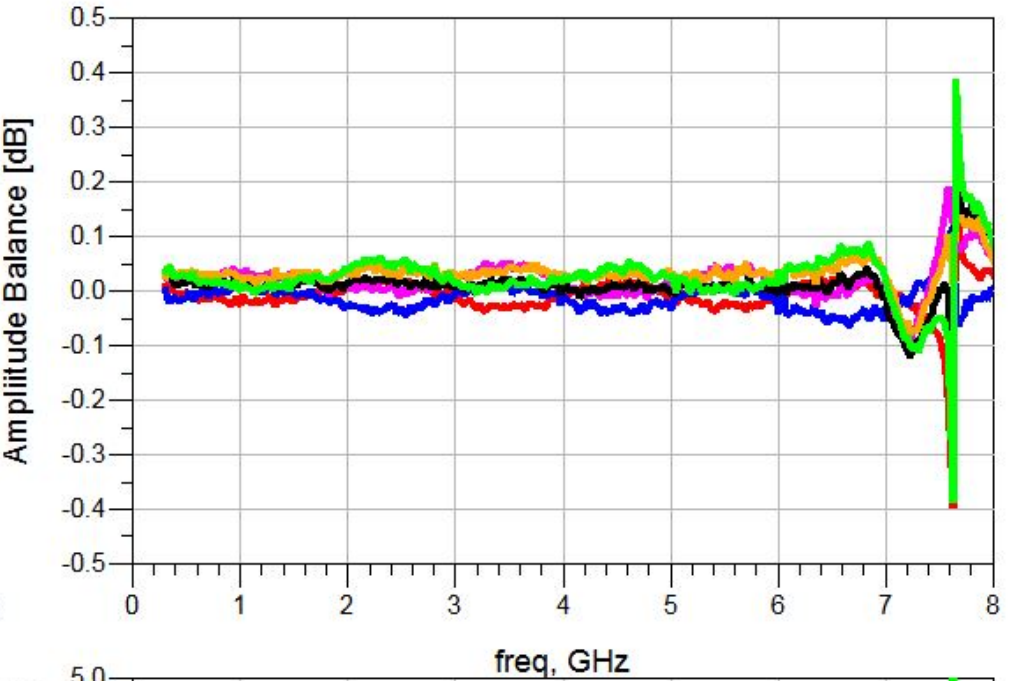
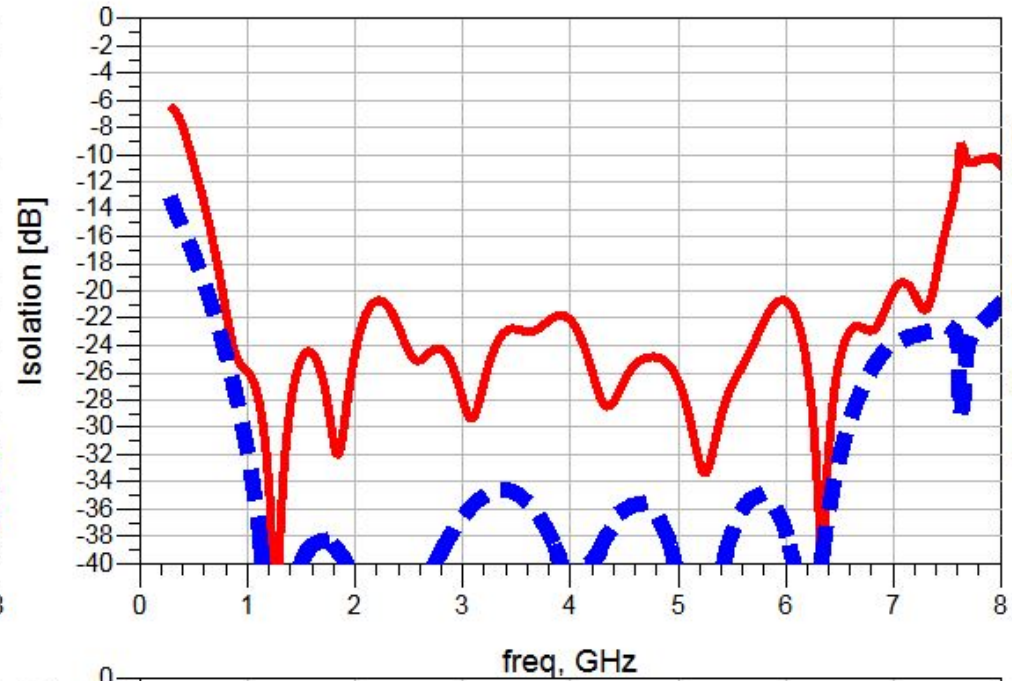
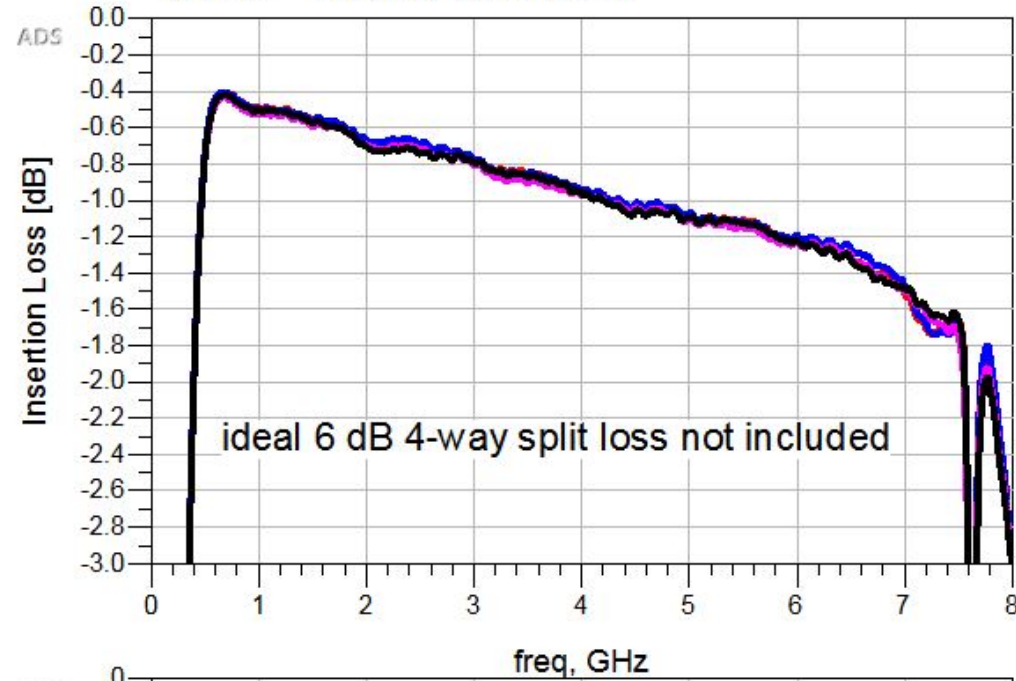
Port Definition:



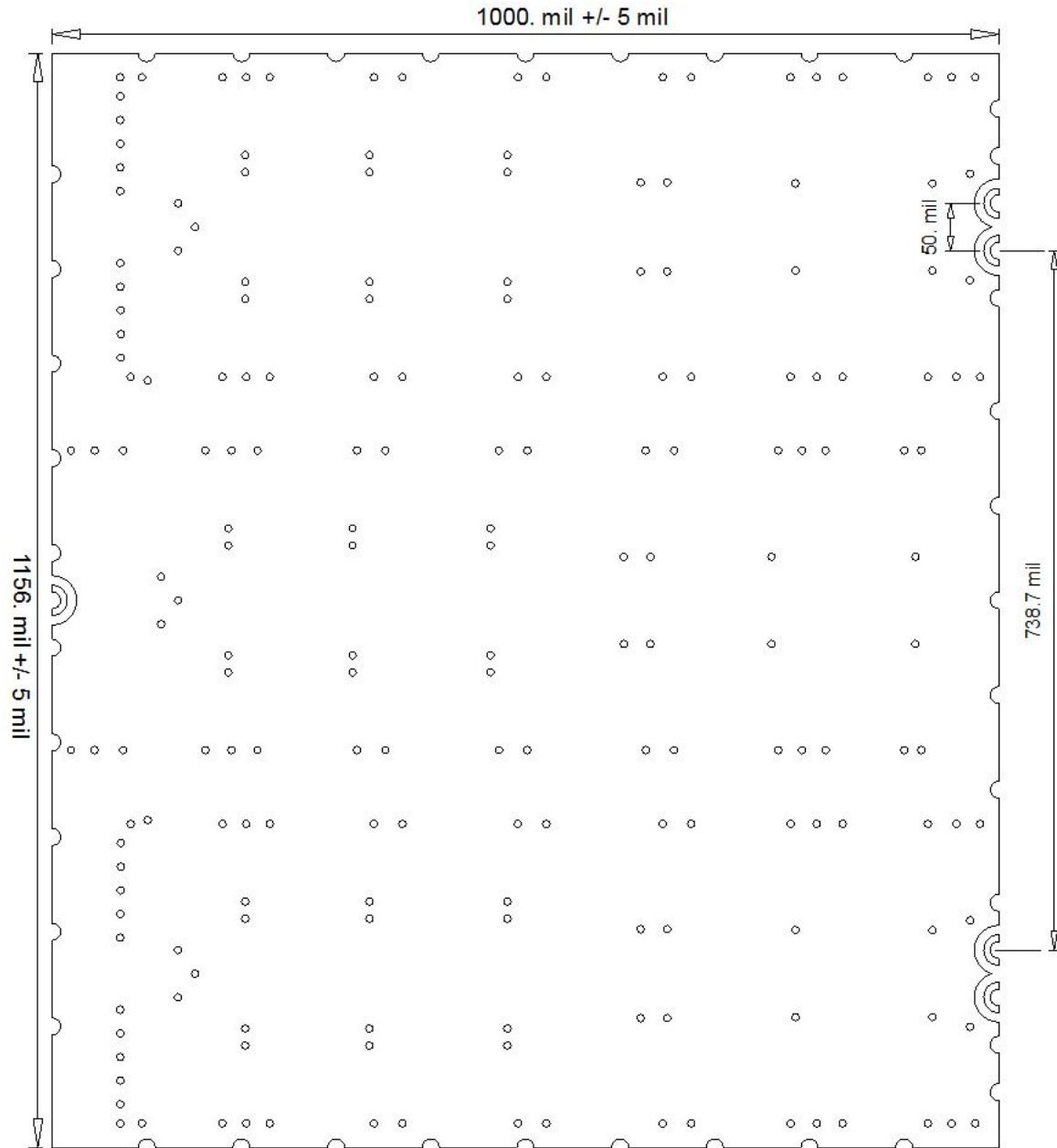
Specifications (at Room Temperature):	
Frequency Range [GHz]	0.5 to 7
Insertion Loss @ 6 GHz [dB]	< 1.4
Near Port Isolation [dB] (0.5 to 0.6 GHz)	> 10
Near Port Isolation [dB] (0.8 to 7 GHz)	> 19
Far Port Isolation [dB] (0.5 to < 0.6 GHz)	> 16
Far Port Isolation [dB] (0.8 to 7 GHz)	> 24
Input (Common Port) Return Loss [dB] (0.5 to < 0.6 GHz)	< -12
Input (Common Port) Return Loss [dB] (0.6 to 7 GHz)	< -14
Output Return Loss [dB]	< -19
Maximum Power as Splitter [Watts]	> 20*
Maximum Power as Combiner [Watts], Same-Frequency/In-Phase Signals	> 20*
Maximum Power as Combiner [mWatts], Same-Frequency/Anti-Phase Signals	= 50 **
Phase Unbalance to 6 GHz [degrees]	+/- 2.5
Amplitude Unbalance to 6 GHz [dB]	+/- 0.15
Operating Temperature Range [degrees C]	-55 to 125
Mass [grams]	< 2.6
* 20 watts is a test setup limitation, NOT a device limitation (tested at CW frequency of 3.55 GHz)	
** internal 0201 isolation resistor worst-case limitation (when combining Same-Frequency/perfectly-Anti-Phase signals)	
** These devices are NOT high power combiners	
The common port is AC-coupled (a series capacitor is present). Output ports are not AC-coupled and signal pairs appear as DC shorts. If a DC bias is needed at the output ports, then external series capacitors will need to be designed in to Tlines	

Typical Device RF Performance:

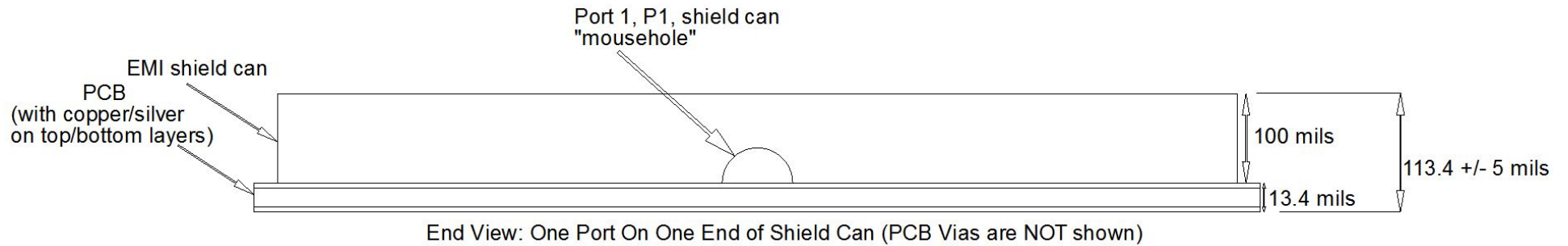
device = #24p1, 11/27/2017



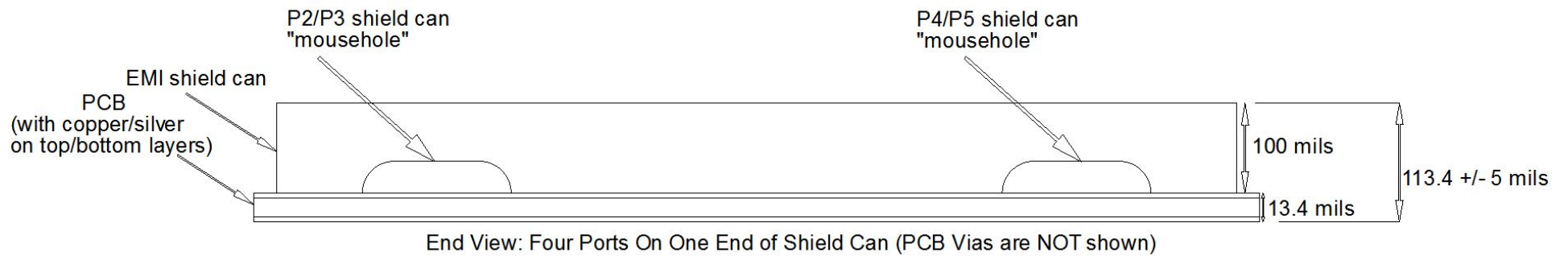
Mechanical Dimensions, Bottom View:



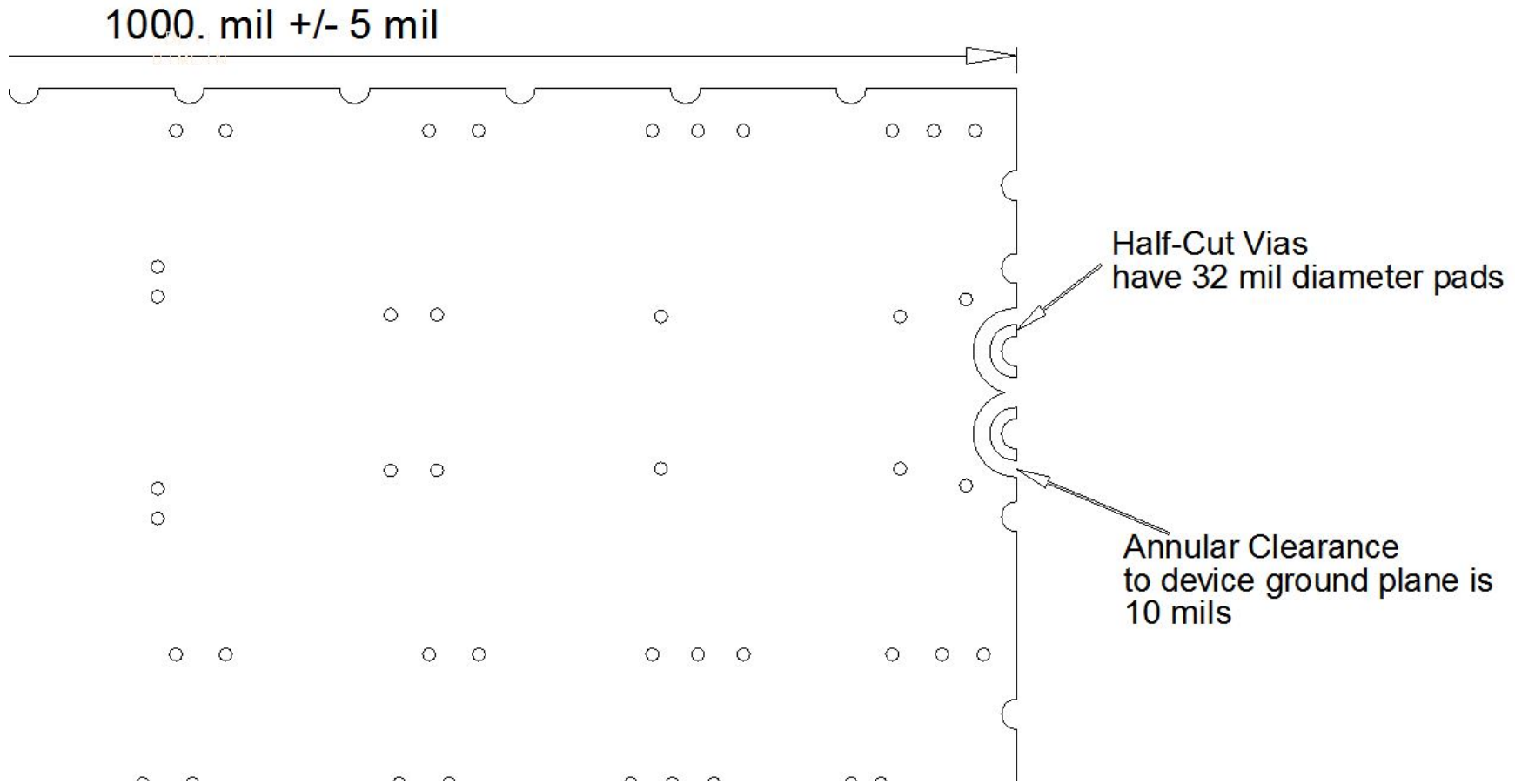
Mechanical Dimensions, End One View (PCB board vias are not shown):



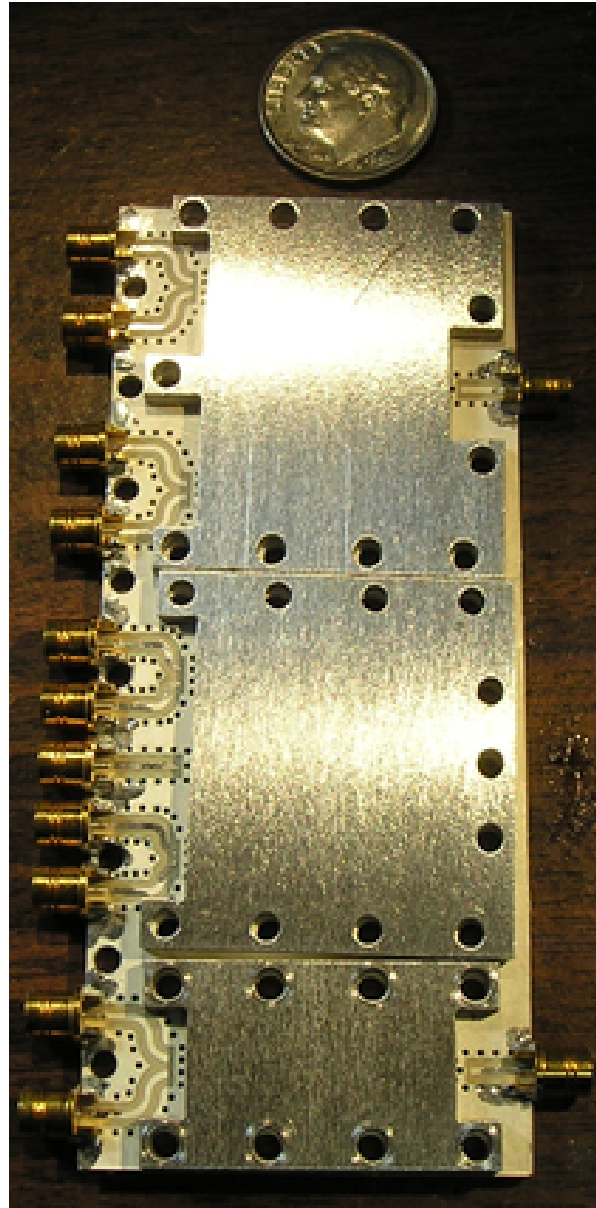
Mechanical Dimensions, End Two View (PCB board vias are not shown):



Mechanical Dimensions, Zoom-In On Device Via Details:



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



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