



BroadBand Surface Mount (SMT) 4-Way RF Splitter/Combiner, [Version 2](#)

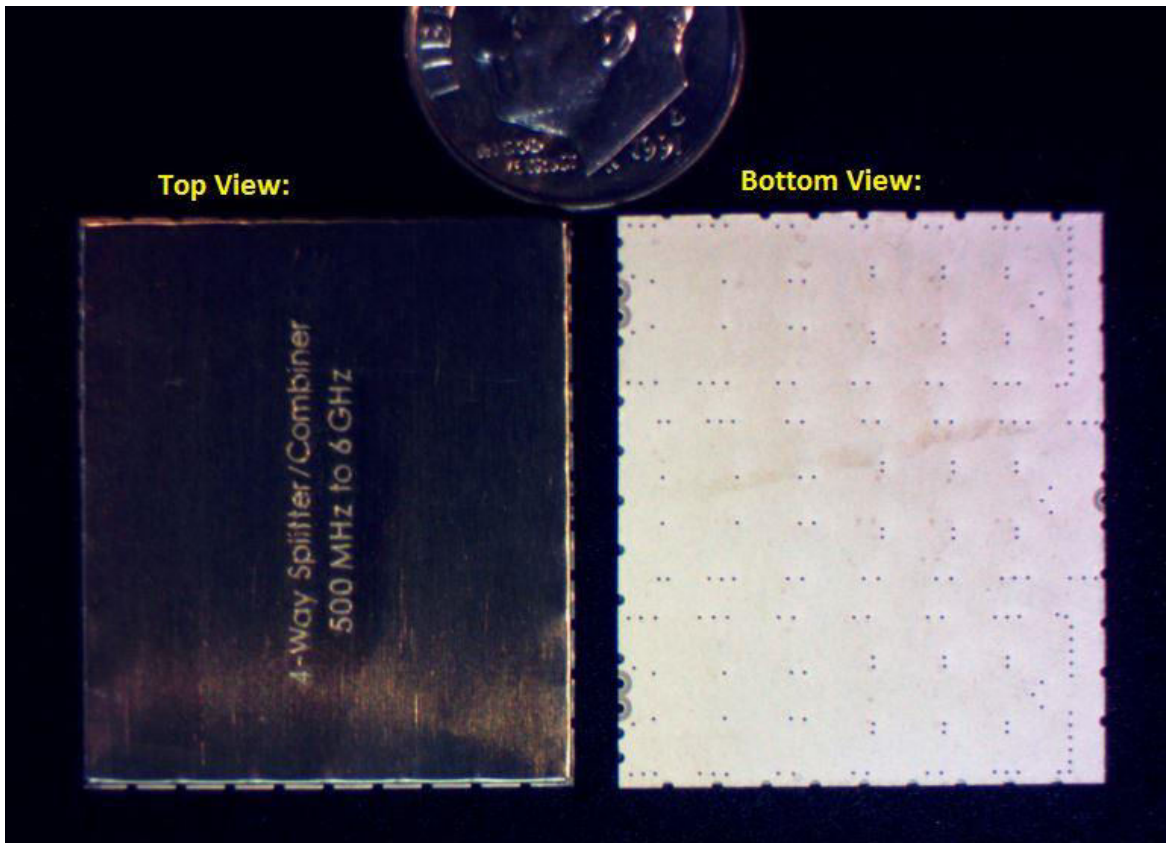
Features:

- BroadBand 0.5 to 7 GHz Operation
- Low Loss (< 1.4 dB at 6 GHz)
- Excellent Amplitude/Phase Balance to 6 GHz (+/- 0.15 dB, +/-2.5°)
- High Power (20 watts as splitter)
- RoHs Compliant

Datasheet Part Number = [BBTLine_4Way_Version2_SMT](#)

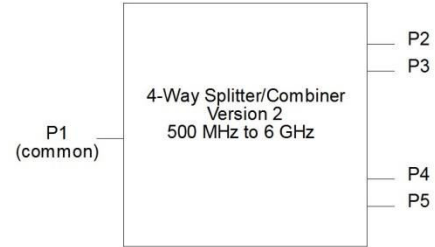
Note: The "Version 2" 4-Way has the common port on one side of the device and the other four ports on the opposite side.

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:

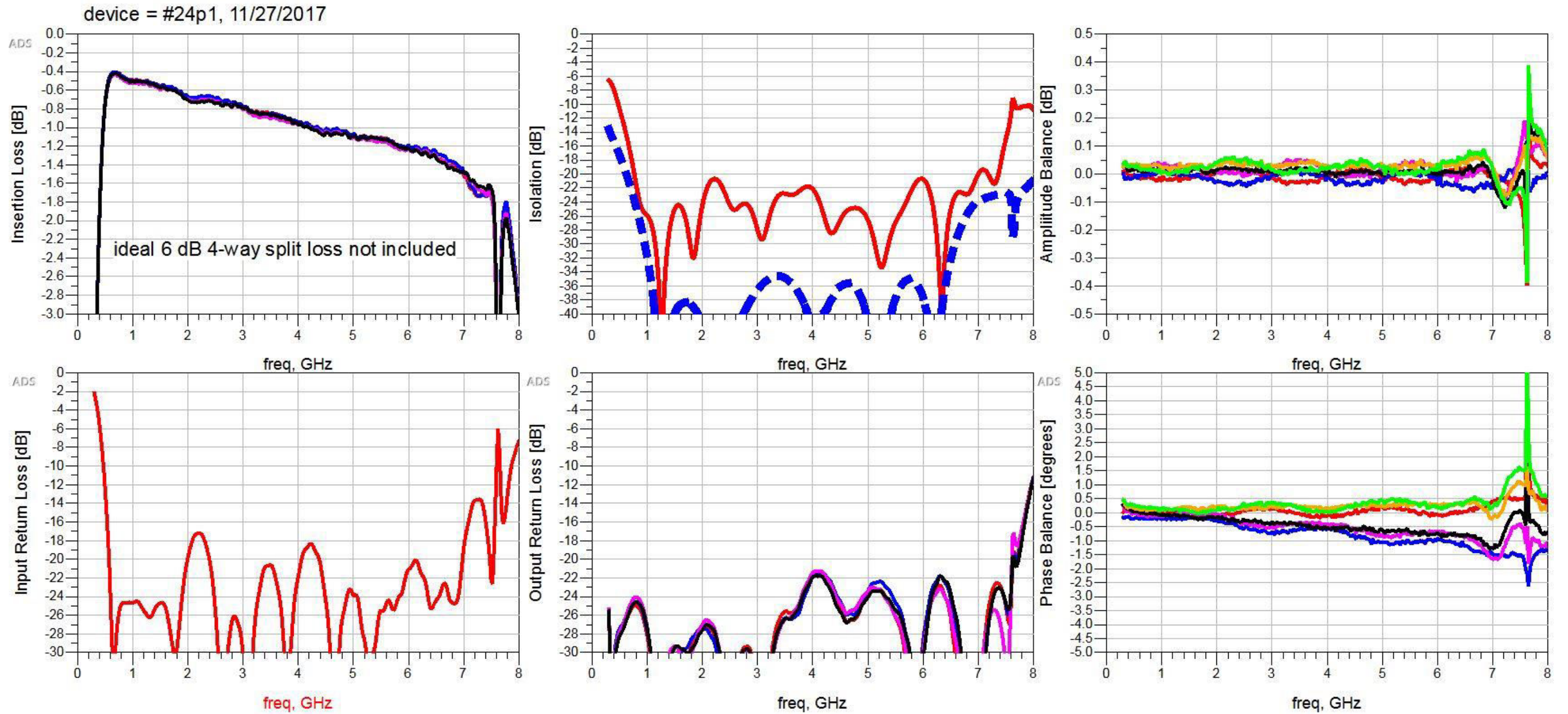


For Isolation Specification:

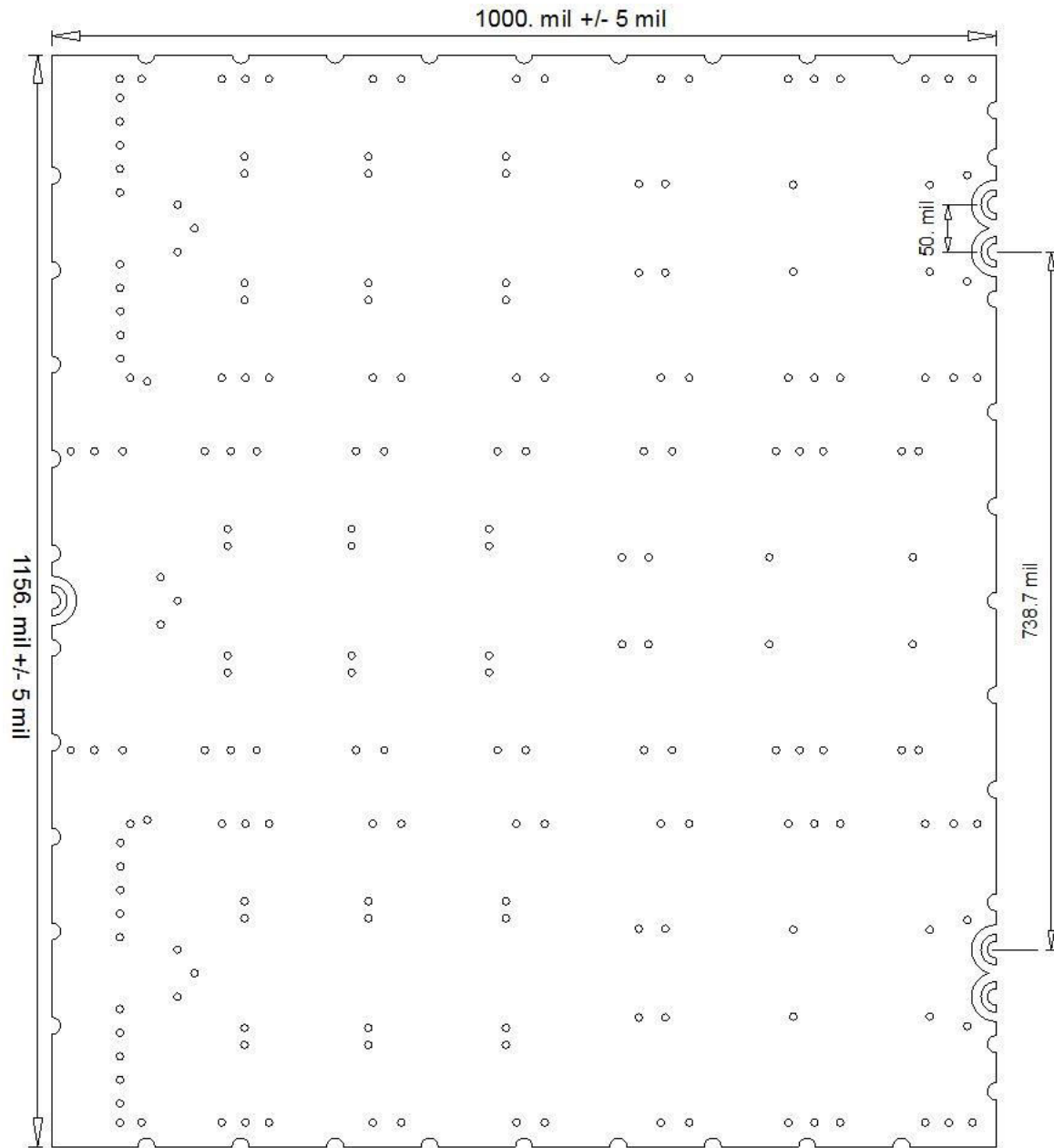
"Near" Ports are P2/P3 and P4/P5
All other combinations are "Far" Ports

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 < 0.8 GHz)	> 10
Near Port Isolation [dB] (0.8 to 7 GHz)	> 19
Far Port Isolation [dB] (0.5 to < 0.8 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)	< -16
Output Return Loss [dB]	< -19
Maximum Power as Splitter [Watts]	> 20*
Maximum Power as Combiner [mWatts], In-Phase Signals	> 20*
Maximum Power as Combiner [mWatts], 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 (CW frequency of 3.55 GHz)	
** internal 0201 isolation resistor limitation when combining perfectly anti-phase signals	

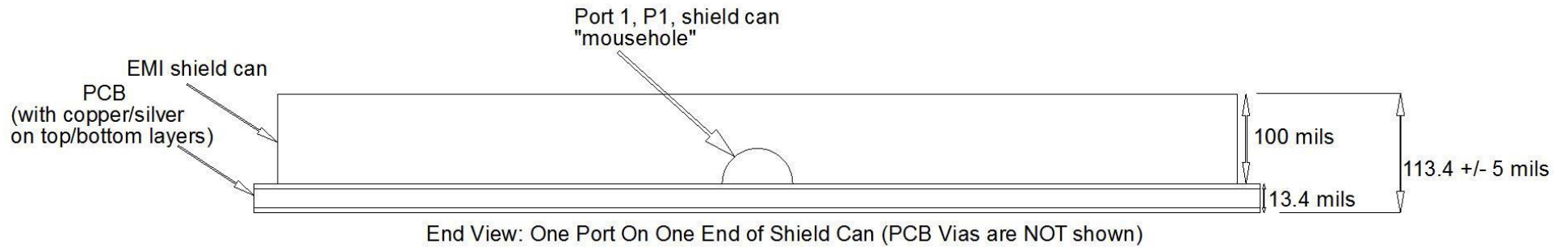
Typical Device RF Performance:



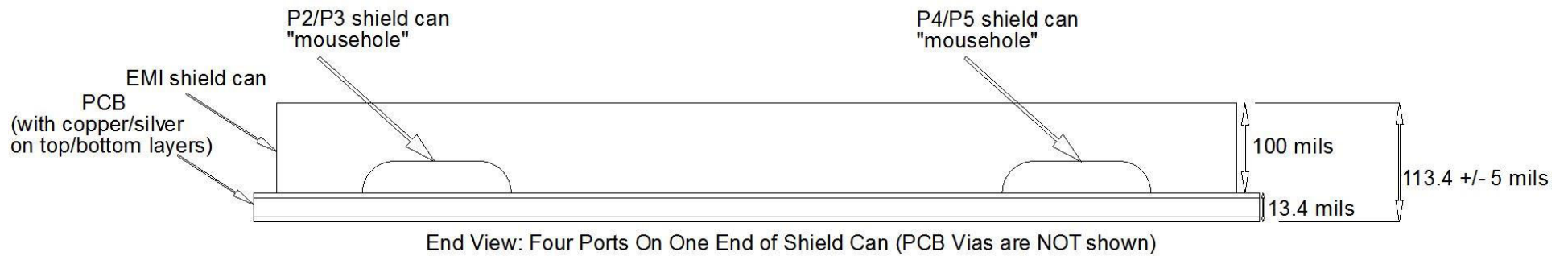
Mechanical Dimensions, Bottom View:



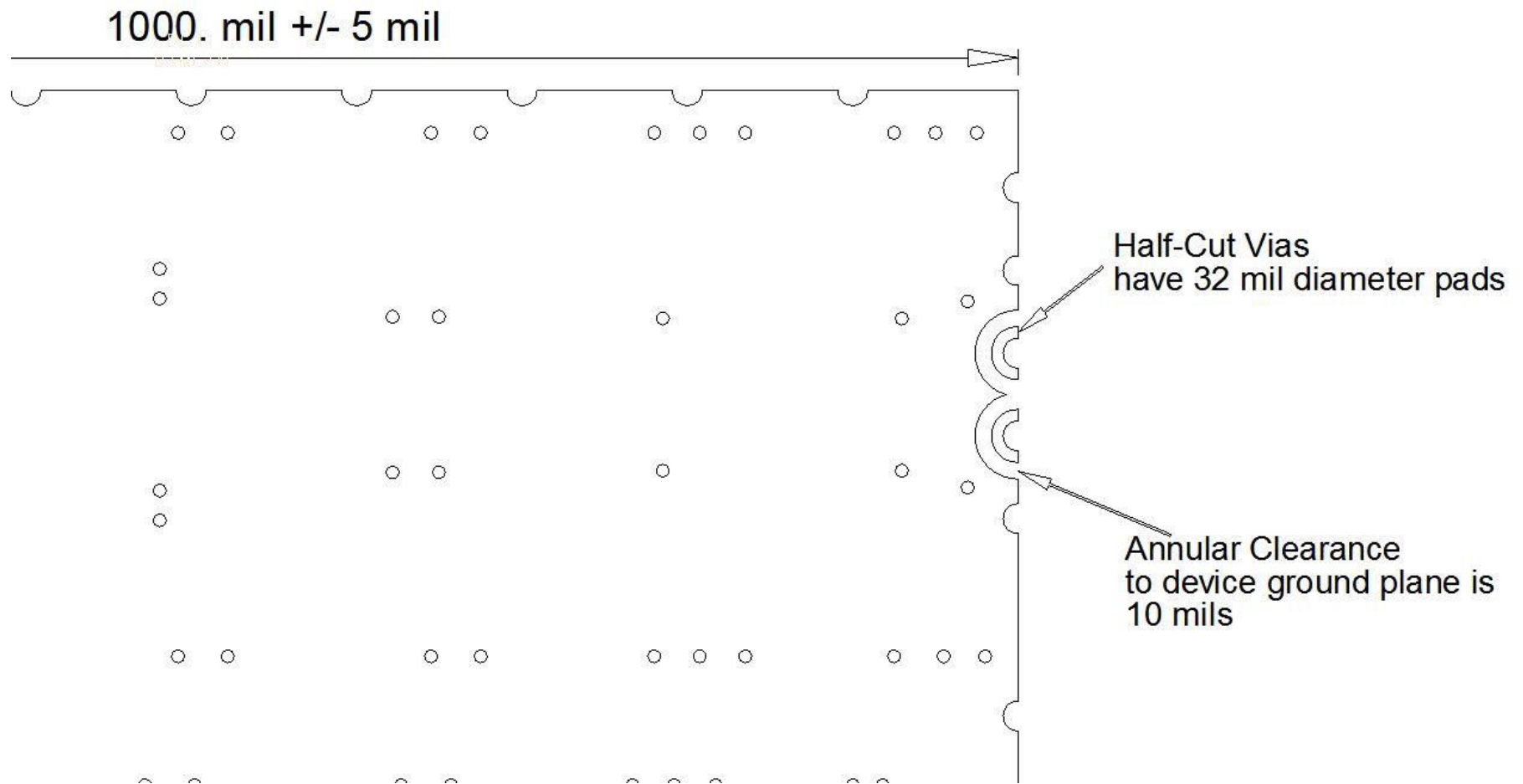
Mechanical Dimensions, End One View (PCB board vias are not shown):



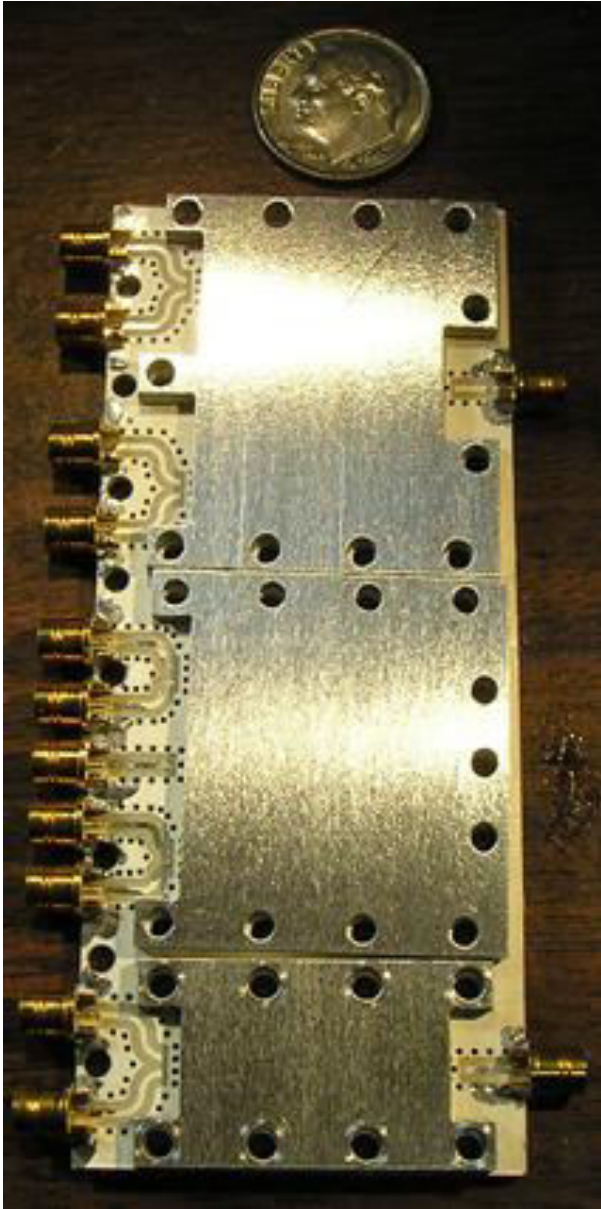
Mechanical Dimensions, End Two View (PCB board vias are not shown):



Mechanical Dimensions, Zoom-In On Device Via Details:



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



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