



[4-Way RF Splitter Version 1 - BroadBand - Surface Mount \(SMT\)](#)

Splitter Features:

BroadBand 0.5 GHz to 7 GHz

Low Loss (Less Than 1.3 dB at 6 GHz)

Excellent Amplitude/Phase Balance (0.15 dB/2.5 Degrees @ 6 GHz)

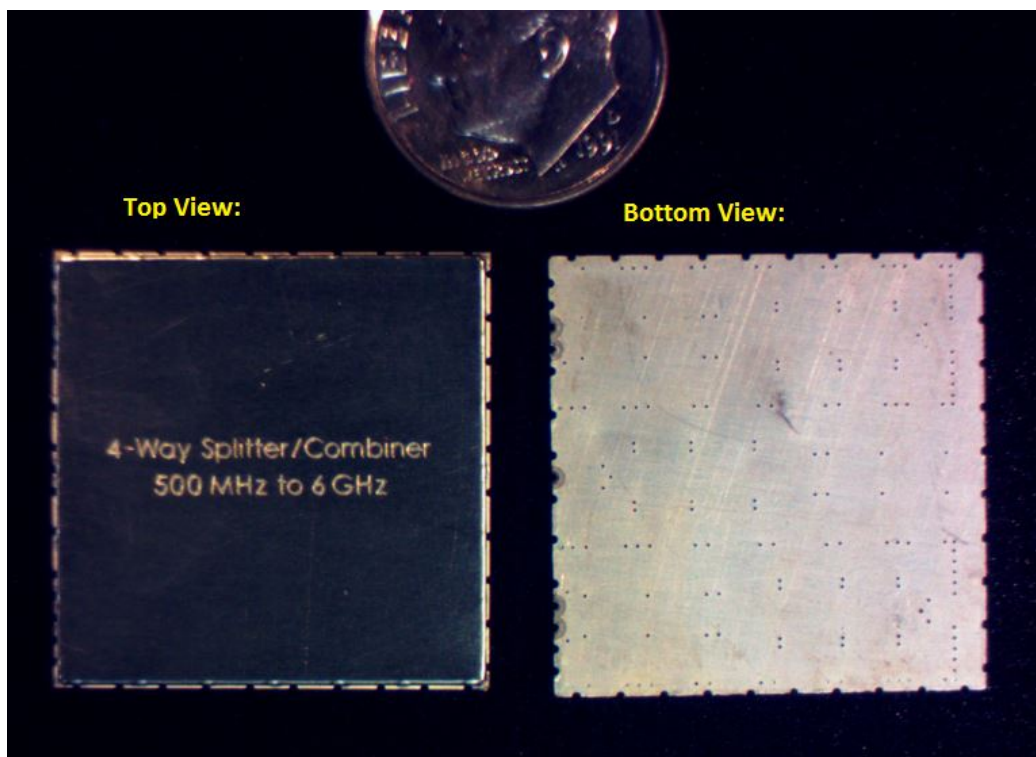
High Power (Greater Than 20 Watts As A Splitter)

RoHs Compliant

Datasheet Model Number = [BBTLine_4Way_V1_SMT](#)

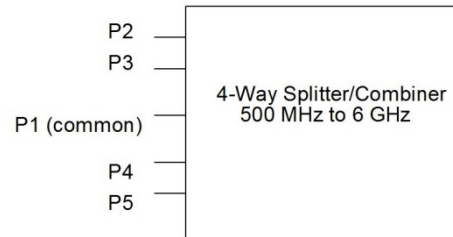
Version1 has all five ports on one side of the device

Description: Shown below is a patented (U.S. Patent 9,570,792) broadband 4-way 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 power handling capability.



RF Specifications:

Port Definition:

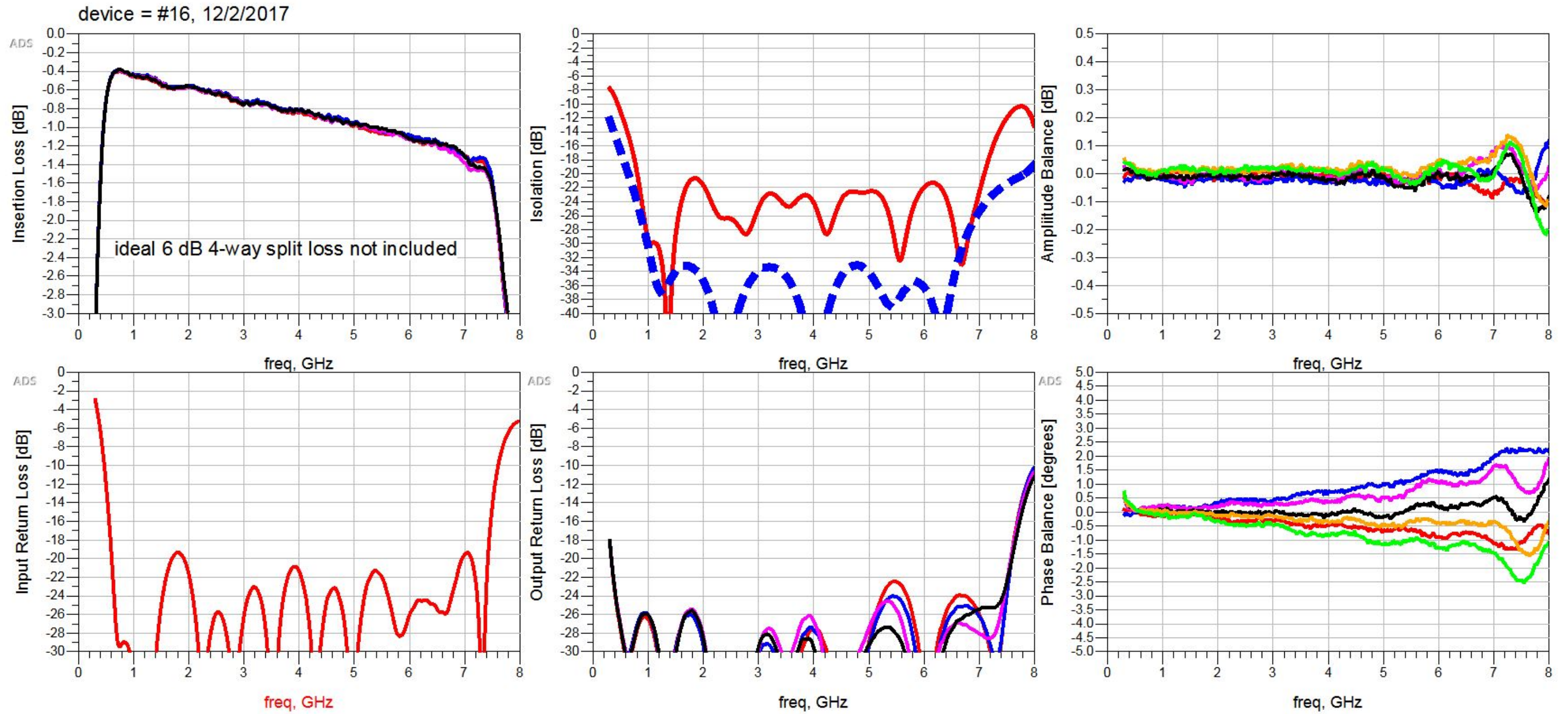


For Isolation Specification:

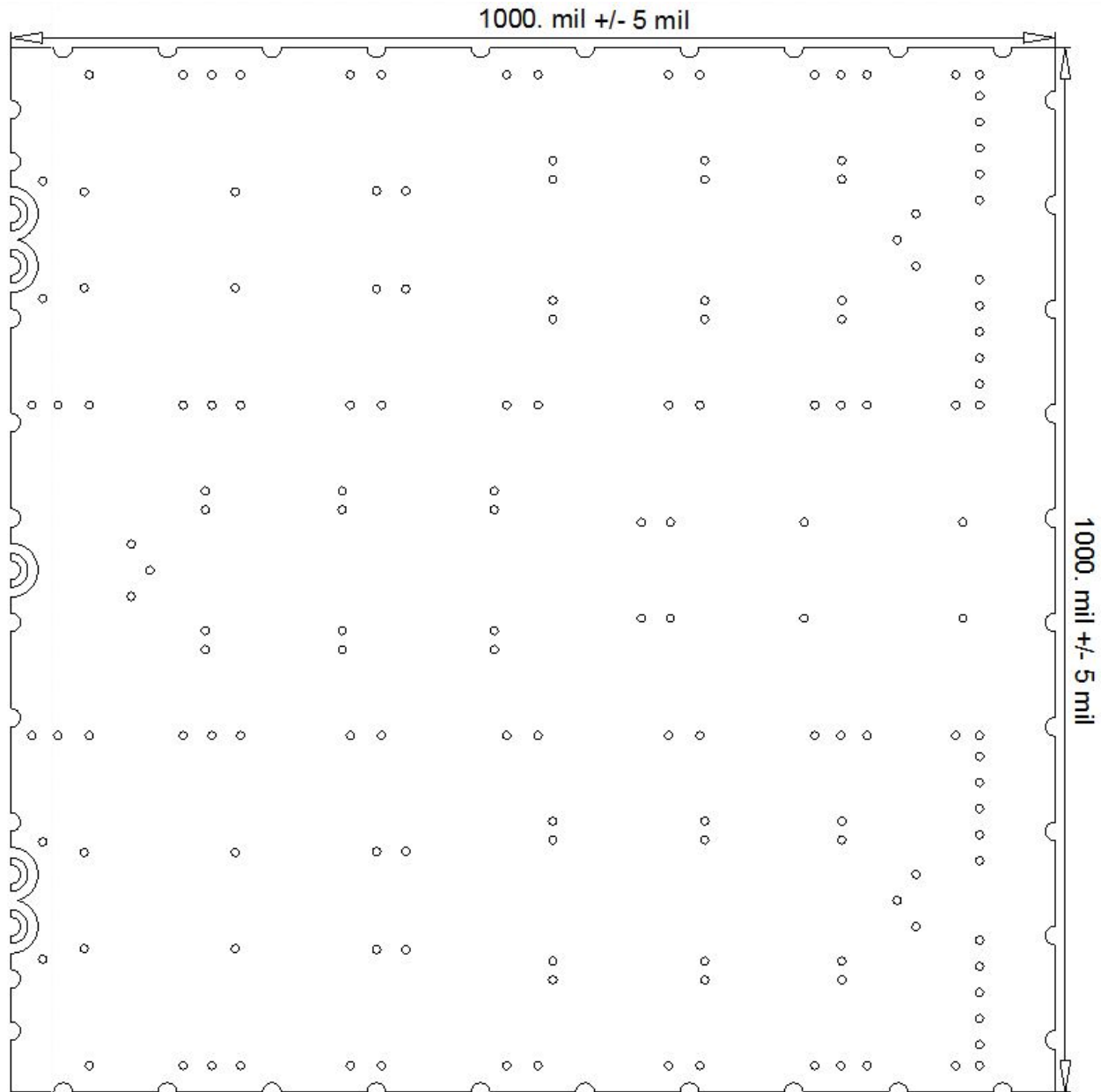
"Near" Ports are P2/P3 and P4/P5
All other combinations are "Far" Ports

Specifications (at Room Temperature):	
Frequency Range [GHz]	0.5 to 7
Insertion Loss @ 6 GHz [dB]	< 1.3
Near Port Isolation [dB] (0.5 to < 0.9 GHz)	> 11
Near Port Isolation [dB] (0.9 to 6.9 GHz)	> 20
Far Port Isolation [dB] (0.5 to < 1 GHz)	> 16
Far Port Isolation [dB] (1 to 6.6 GHz)	> 28
Input (Common Port) Return Loss (0.6 to 7 GHz) [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]	+/- 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	

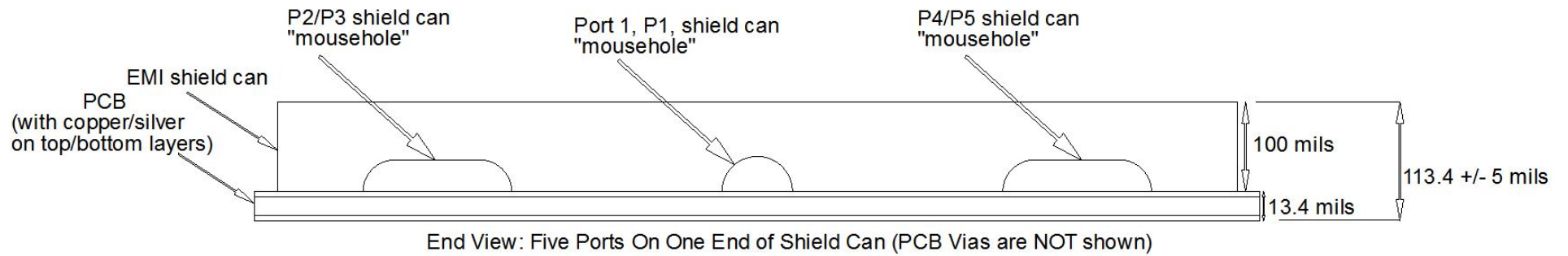
Typical Device RF Performance:



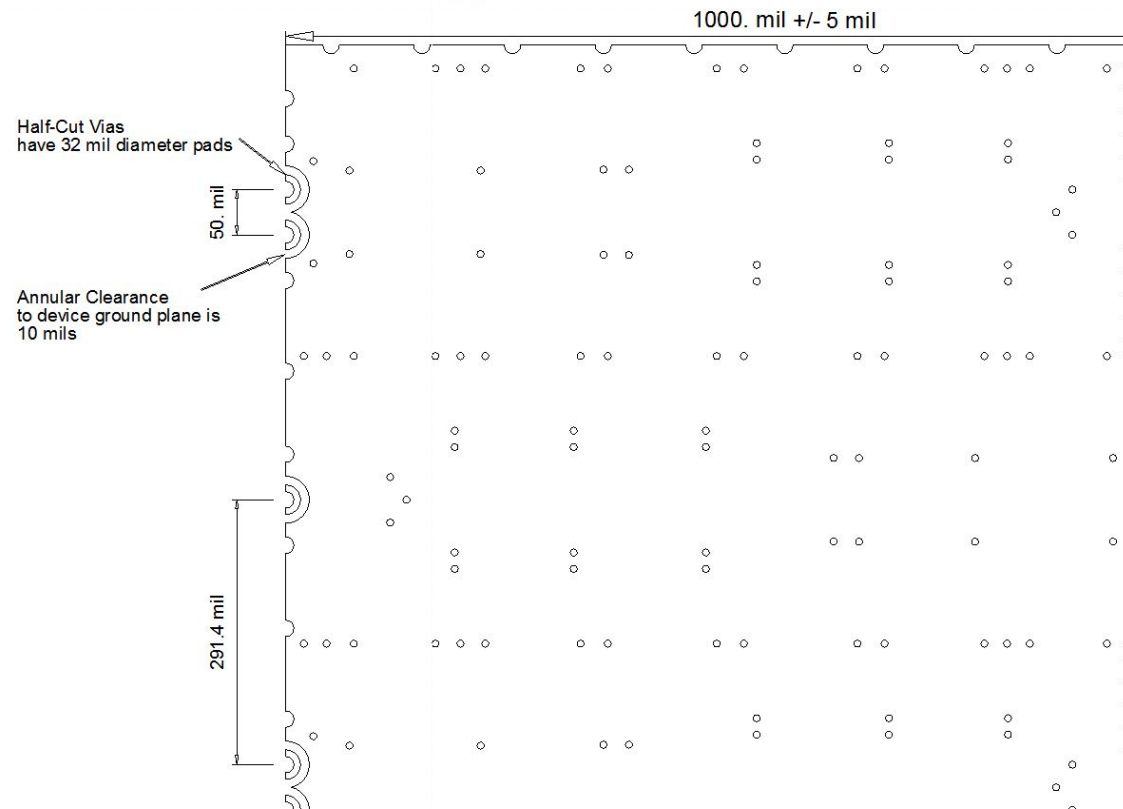
Mechanical Dimensions, Bottom View:



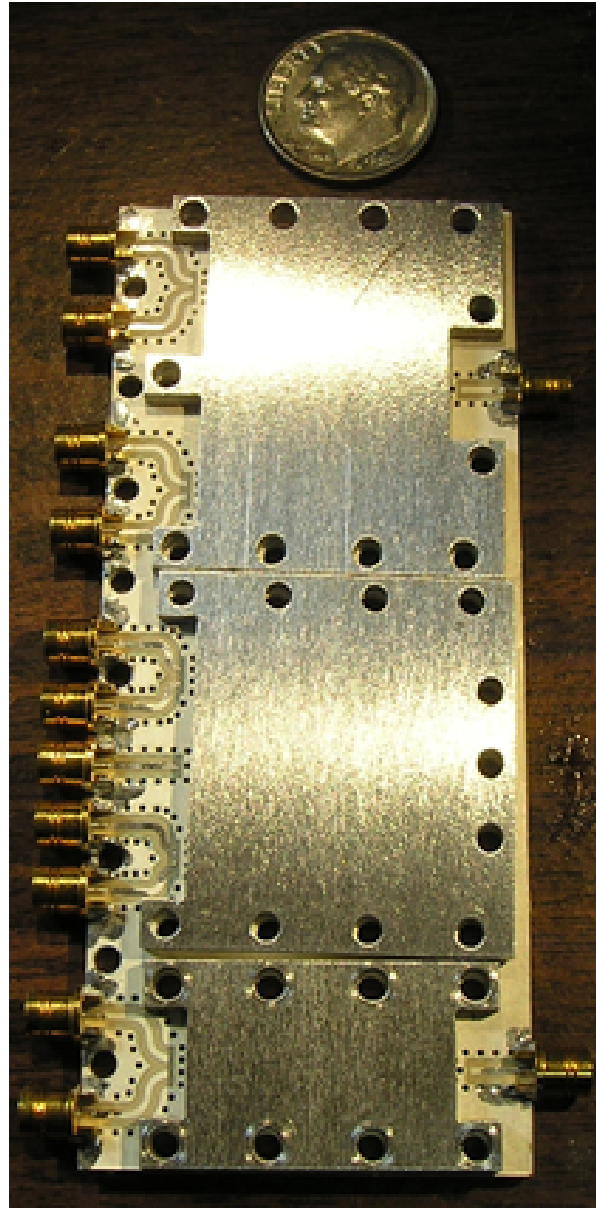
Mechanical Dimensions, End View (PCB board vias are not shown):



Mechanical Dimensions, Zoom-In On Device Via Details:



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



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