



## BroadBand Surface Mount (SMT) 8-Way RF Splitter/Combiner

### Features:

- BroadBand 0.5 to 7 GHz Operation
- Low Loss (< 2.6 dB @ 6 GHz)
- Excellent Amplitude/Phase Balance to 6 GHz (+/- 0.4 dB, +/- 7°)
- High Power (> 20 watts as splitter)
- RoHs Compliant

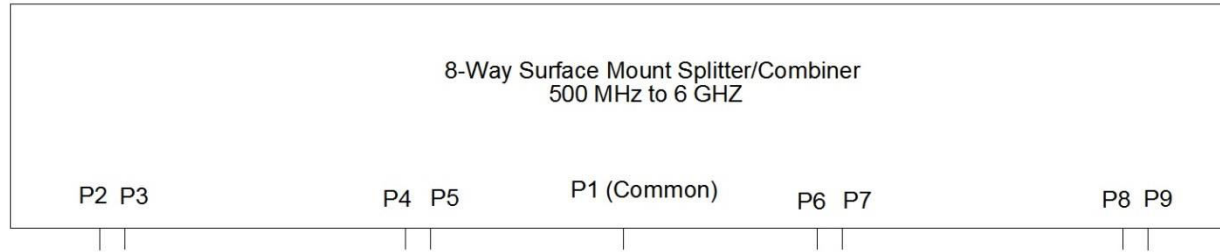
Datasheet Model Number = [BBTLine\\_8Way\\_SMT](#)

Description: Shown below is a patented (U.S. Patent 9,570,792) broadband 8-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.



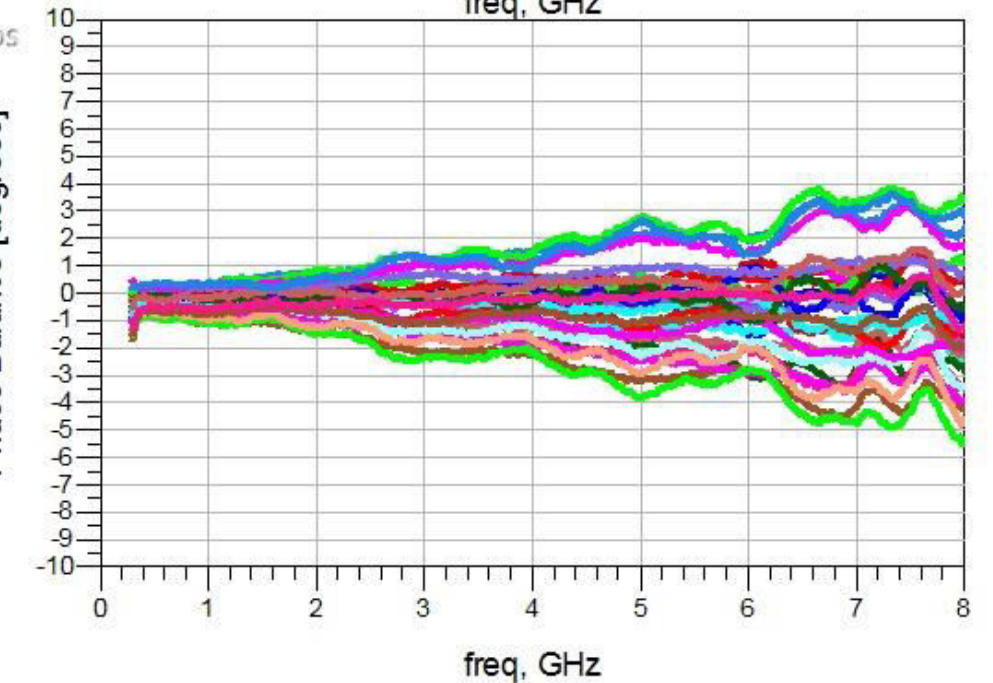
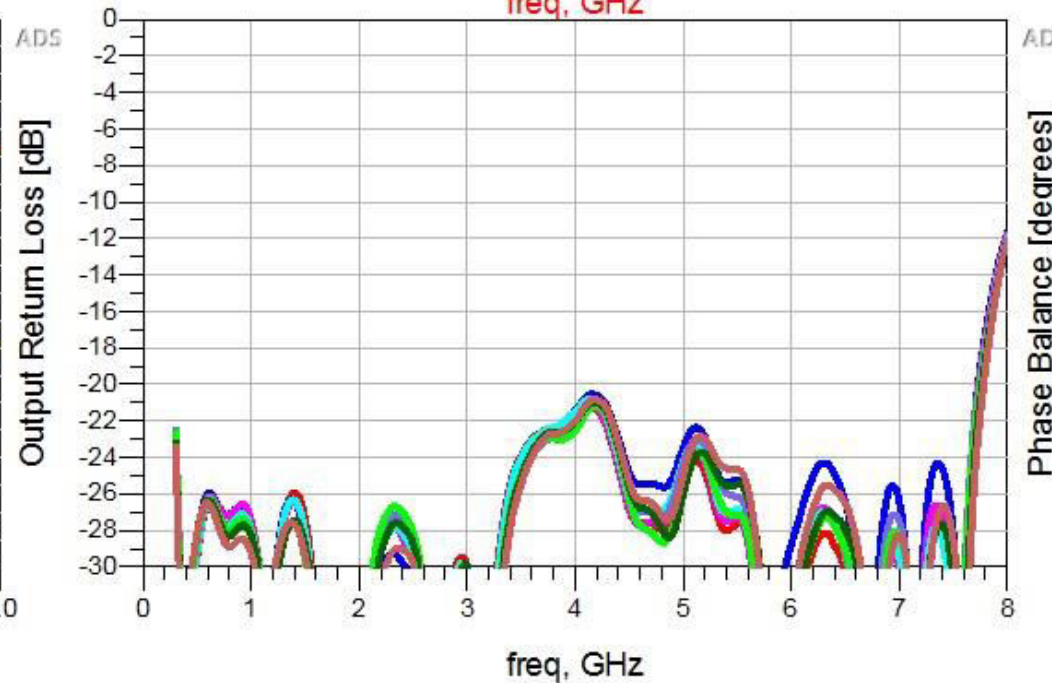
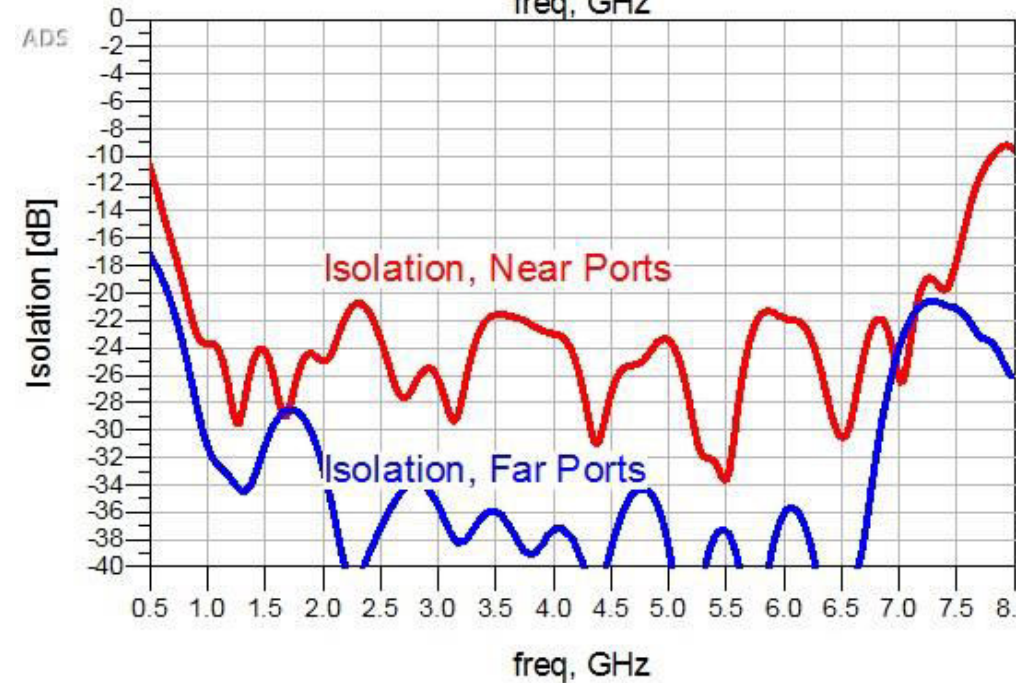
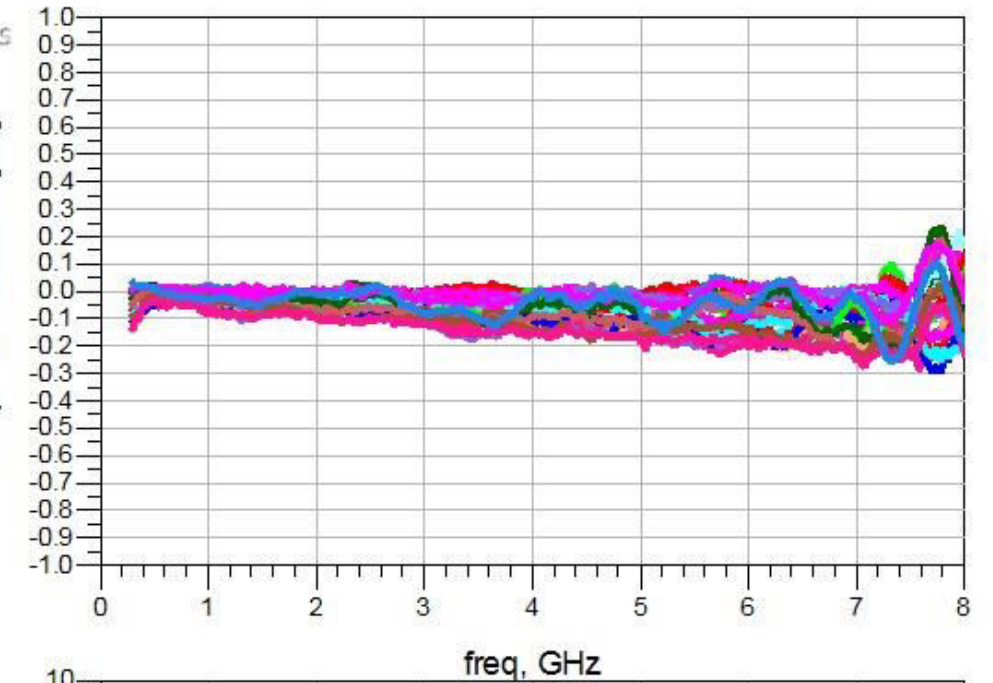
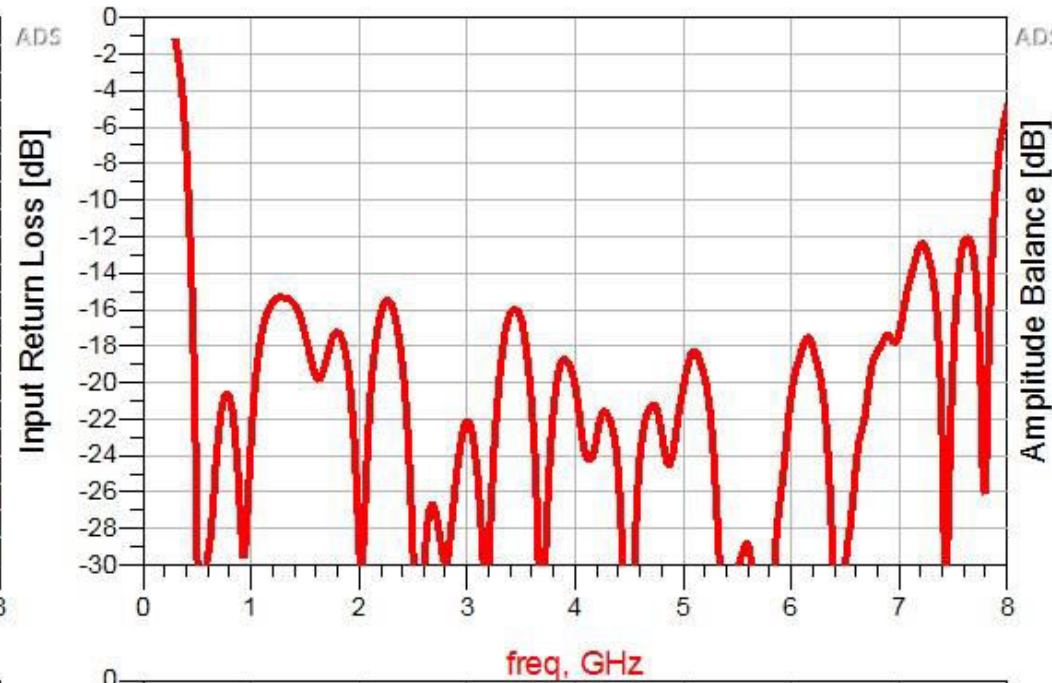
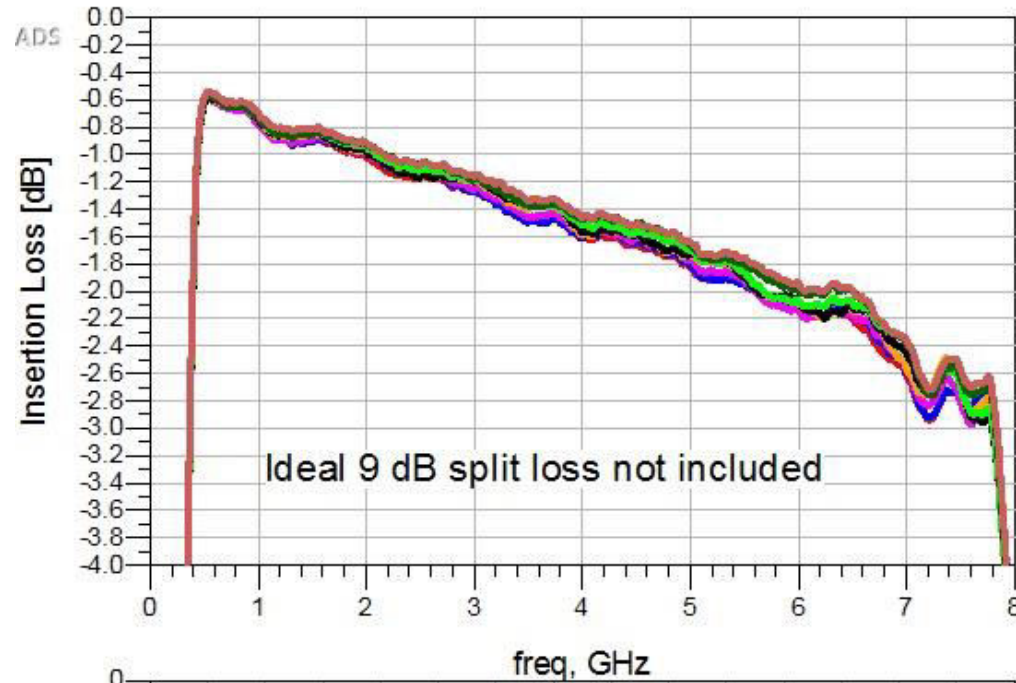
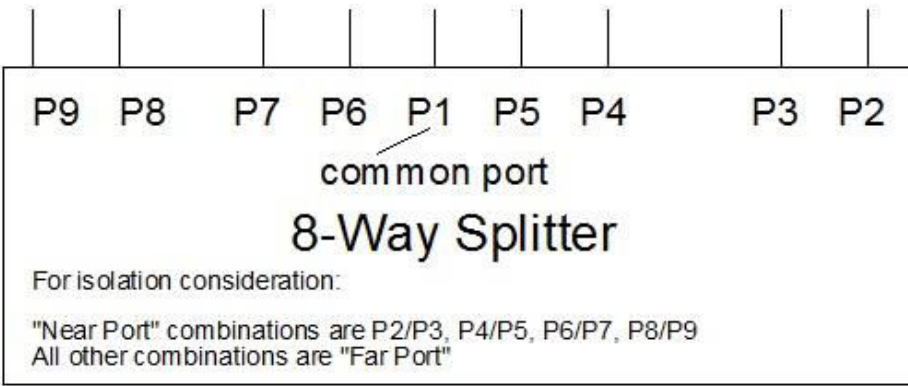
**RF Specifications:**

RF Port Definition:



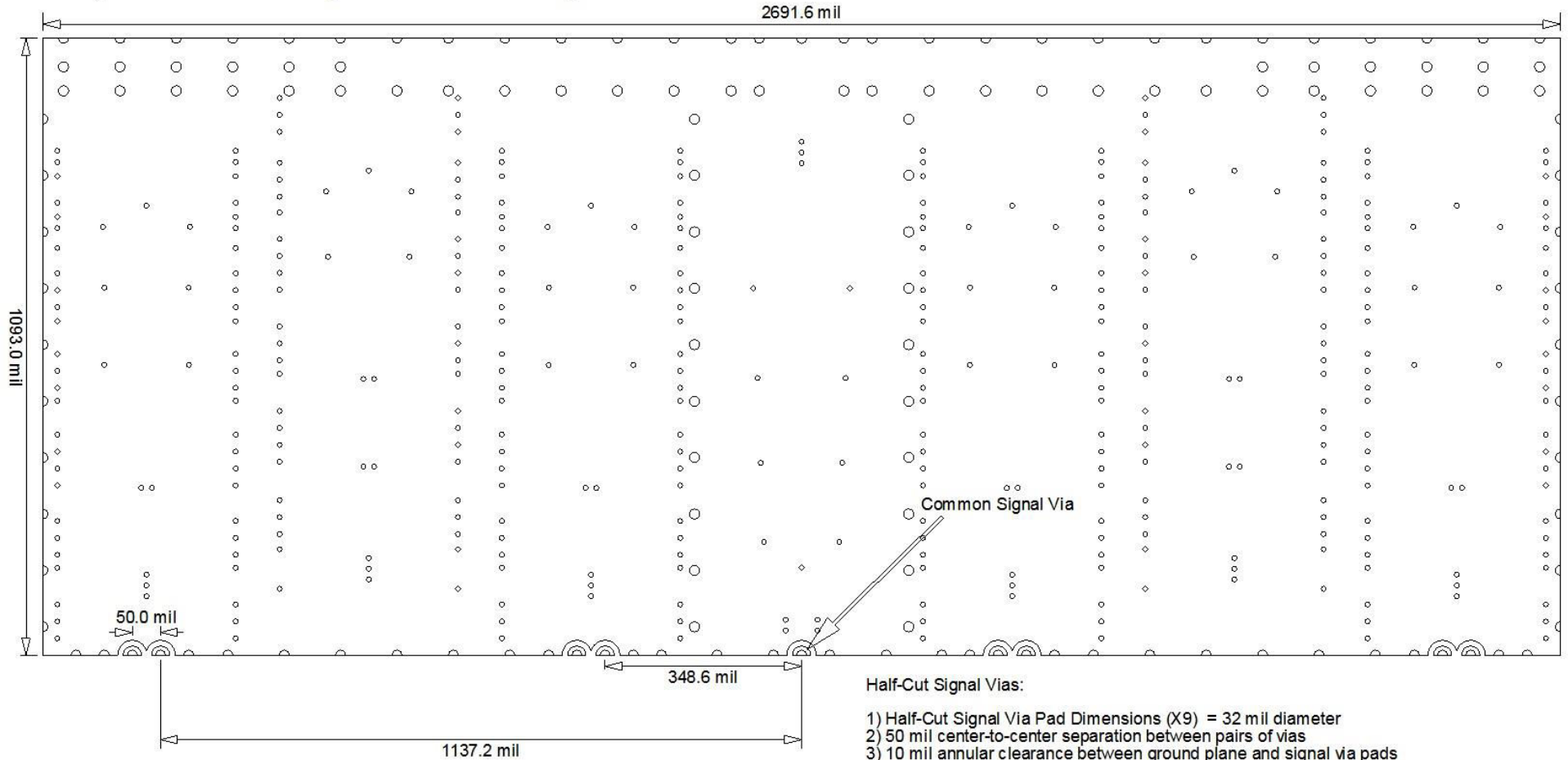
<b>Specifications (at Room Temperature):</b>	
Frequency Range [GHz]	0.5 to 7
Insertion Loss [dB] (@ 6 GHz)	< 2.6
Near Port Isolation [dB] (0.8 to 7 GHz)	> 20
Near Port Isolation [dB] (0.5 to <0.8 GHz)	> 10
Far Port Isolation [dB] (0.875 to 6.9 GHz)	> 26
Far Port Isolation [dB] (0.5 to <0.875 GHz)	> 16
Input (Common Port) Return Loss [dB]	< -14
Output Return Loss [dB] (1 to 6 GHz)	< -18
Maximum Power as Splitter [Watts]	> 20*
Maximum Power as Combiner [mWatts], Anti-Phase Signals	= 50 **
Maximum Power as Combiner [Watts], In-Phase Signals	> 20*
Phase Unbalance [degrees @ 6 GHz]	+/- 7
Amplitude Unbalance [dB @ 6 GHz]	+/- 0.4
* 20 watts is NOT a device limitation but a test setup limitation	
** internal 0201 isolation resistor limitation when combining perfectly anti-phase signals	
<b>Operating Temperature Range:</b> -55 to 125 degrees C	
<b>Mass:</b> < 6 grams	

**Typical Device RF Performance:**

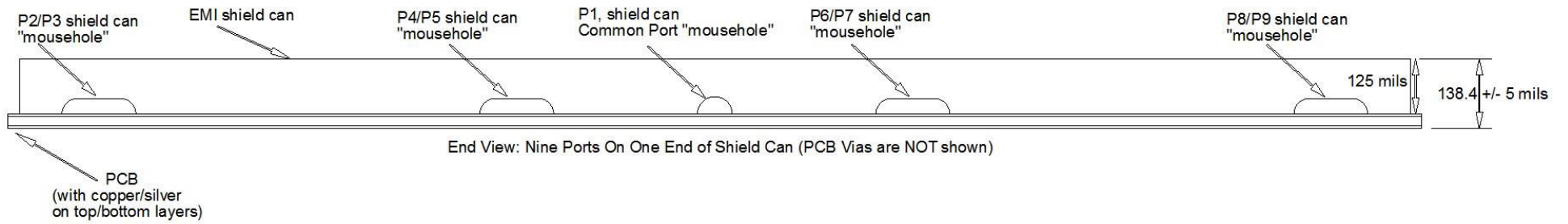


**Mechanical Dimensions, Bottom Ground Plane View:**

**8-Way Surface Mount Splitter/Combiner Signal Via Locations:**



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



**An Evaluation Board with Male SMP Smooth-Bore Connectors is available as shown below:**

