4-Way RF Splitter - SMP Connectors - Broadband - Version 2

Splitter Features:

- **BroadBand - 0.5 GHz to 7 GHz**
- **Low Loss - Less Than 1.5 dB at 6 GHz**
- **Excellent Amplitude/Phase Balance - 0.15 dB/2.5 Degrees At 6 GHz**
- **RoHs Compliant**
- **High Power - Greater Than 20 Watts As A Splitter**

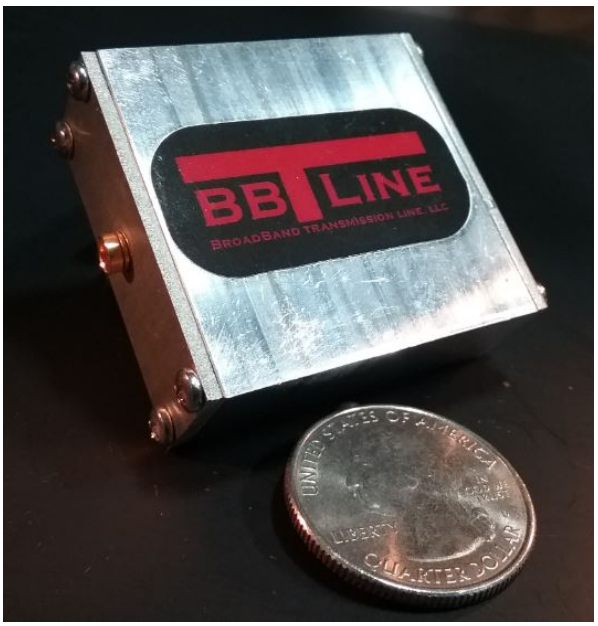
Datasheet Model Number:

BBTLine_4Way_V2_SMP

Version 2 has the common port on opposite side of the other four ports.

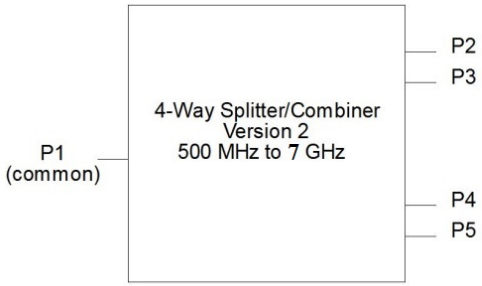
Description:

Shown below is a Patented (U.S. Patent 9,570,792) Broadband 4-way RF Power Combiner with Male SMP Smooth-Bore Connectors. This RF Power Divider is not a typical Wilkinson-style device, but a design which yields a more compact Splitter with excellent low loss RF characteristics and High Power Handling capability as a Splitter.



RF Specifications:

Port Definition:

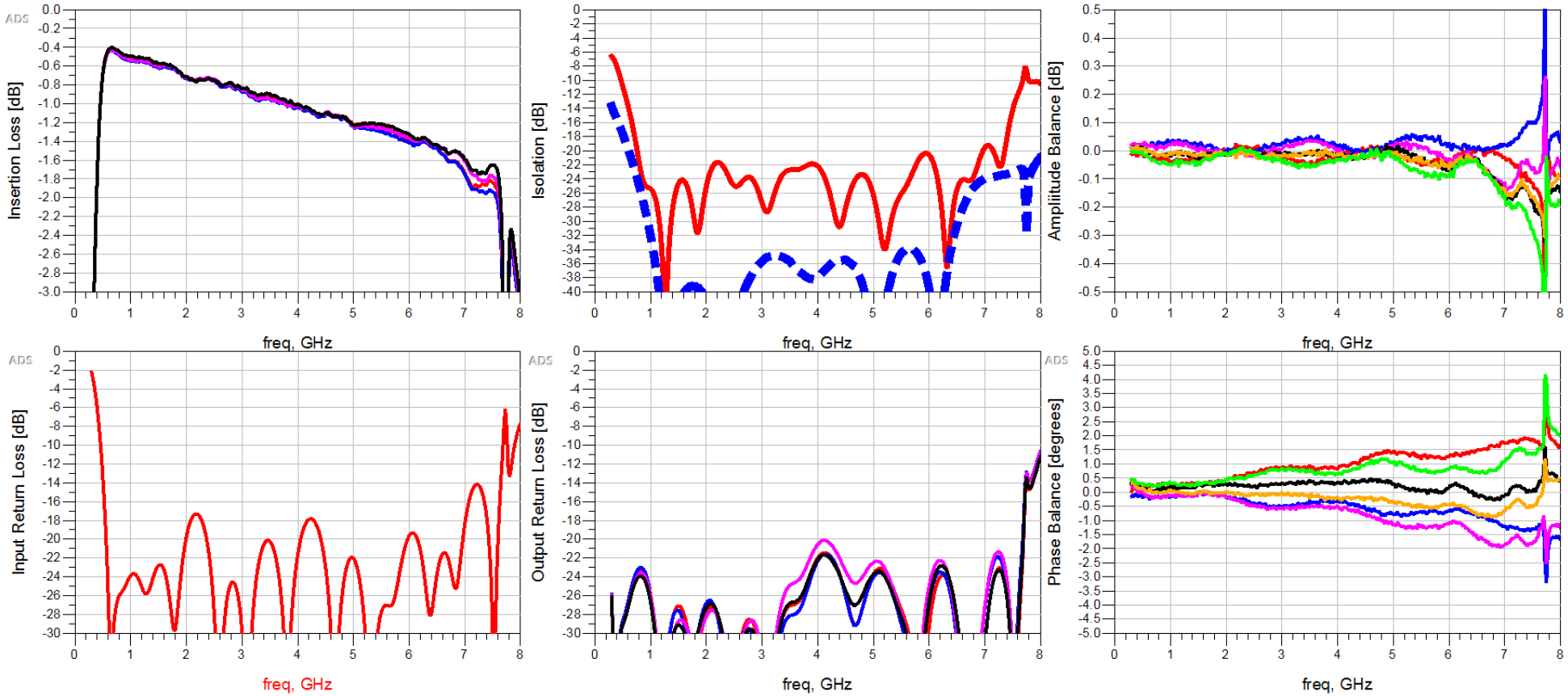


For Isolation Specification:

"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]	< 1.5
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)	> 23
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], Same-Frequency/In-Phase Signals	> 20*
Maximum Power as Combiner [**m**Watts], 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]	< 47
* 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)	

Typical Device RF Performance:



Mechanical Dimensions: