

Wideband Single-Sided Power Divider 4-way SMA Female 500 MHz to 6 GHz

## 4-way SMA Power Divider 500 MHz to 6 GHz

### Product Description

AmpliTech offers a wide selection of High-Quality RF power dividers, featuring Wilkinson design. Model APTPD-4-00500600-SMA-S is a 4-way power divider that operates from 500 MHz to 6 GHz. The configuration is unique in that the input and output ports are on the same side, which allows for front panel mounting in a rack system, and internally where space may be limited. The device is RoHS compliant.

Specifications	Min	Typ	Max	Min
Frequency	500		6000	MHz
Impedance		50		Ohm
Return Loss (Port S)	12.7	17.5		dB
Return Loss (Ports 1-4)	14.7	19.1		dB
Insertion Loss (Above 6.02 dB)	500-3000 MHz	0.7	1.5	dB
	3000-6000 MHz	1.0	2.1	dB
Isolation	17	23		dB
Amplitude Balance		0.2	0.6	dB
Phase Balance		4	10	Degrees
Input Power (CW) <sup>1</sup>			30	Watts

### Mechanical

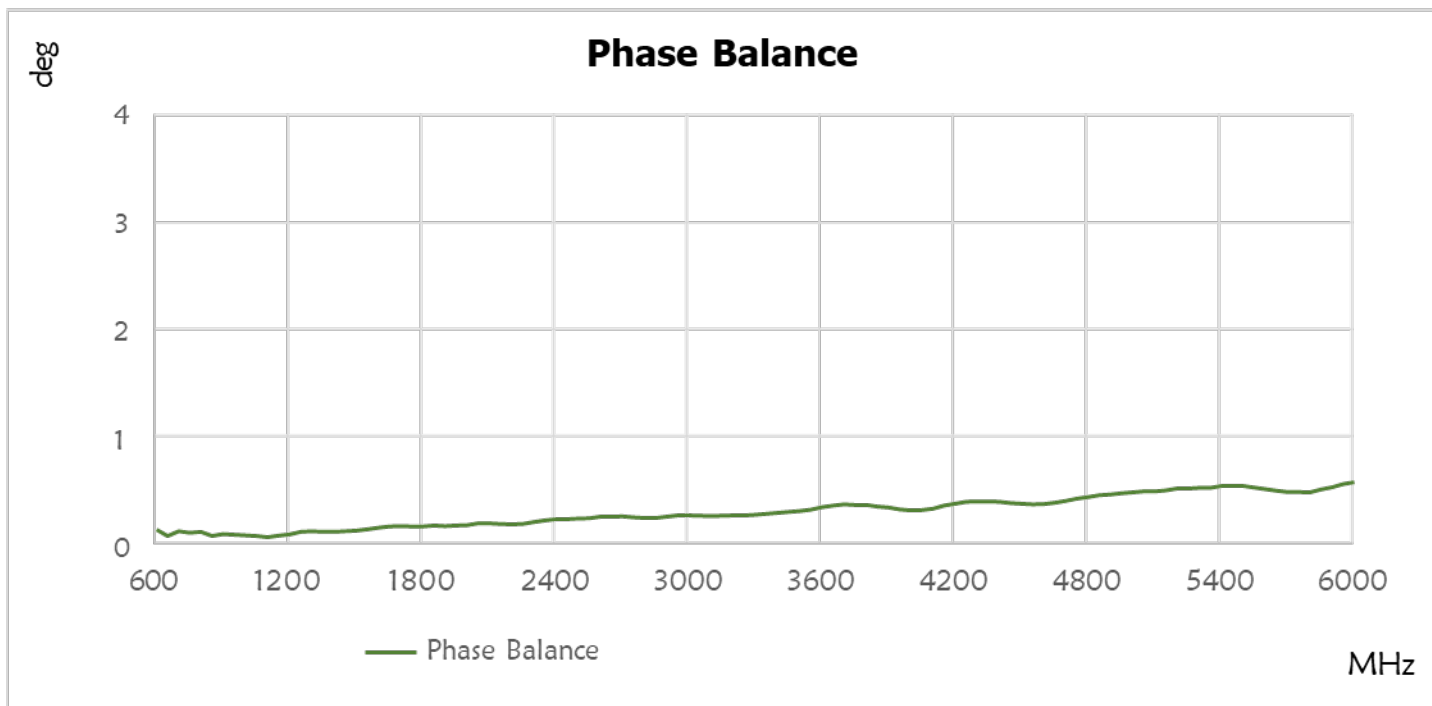
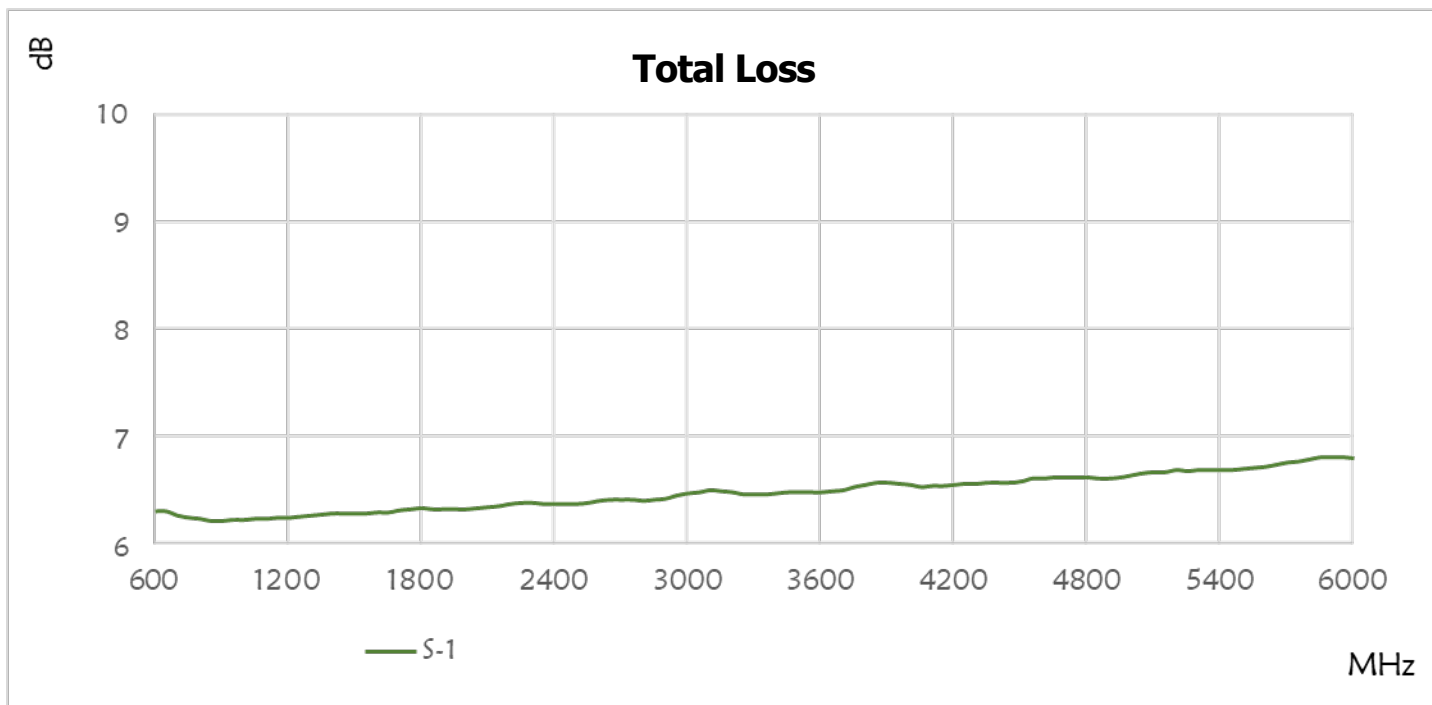
Connector Interface	SMA-Female
Operating Temperature <sup>2</sup>	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight Estimate	6 oz (170 g)
Humidity	10-90% non-condensing
Environment	Indoors Use Only

### Materials

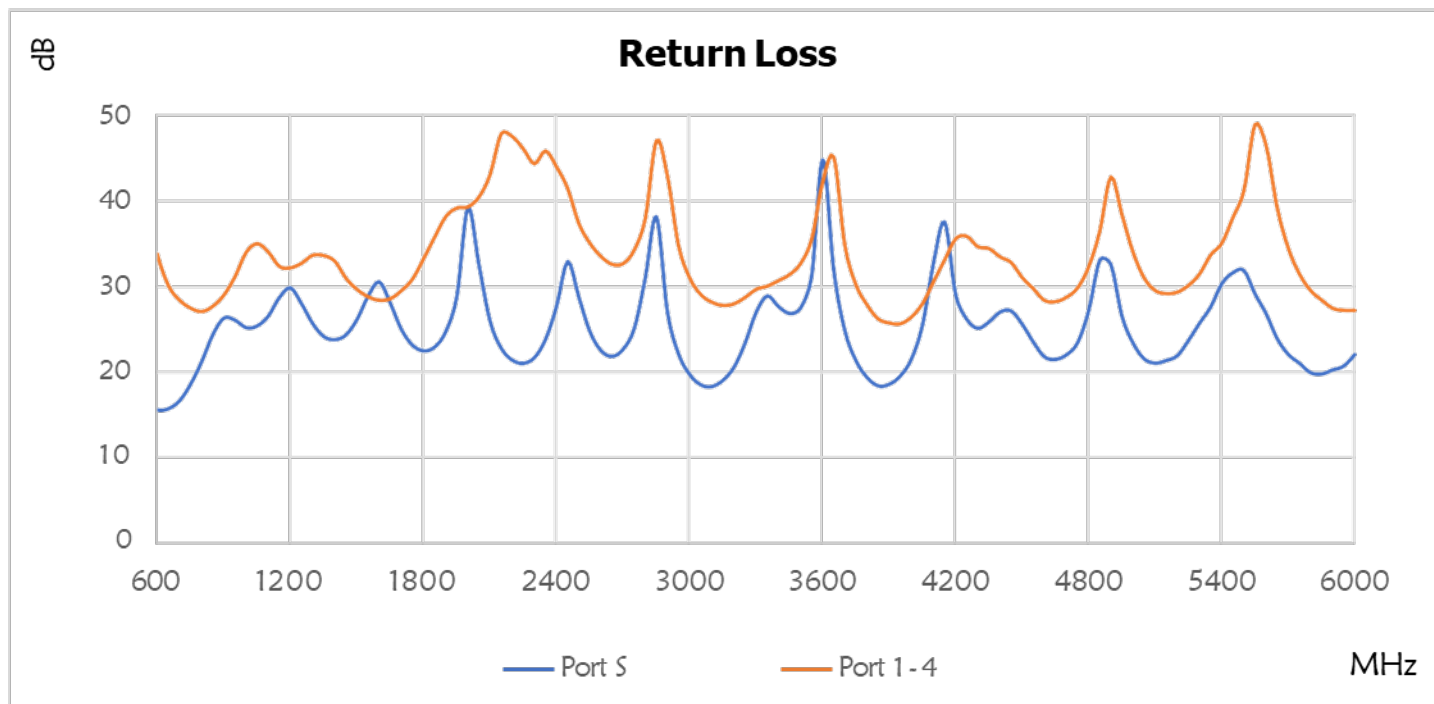
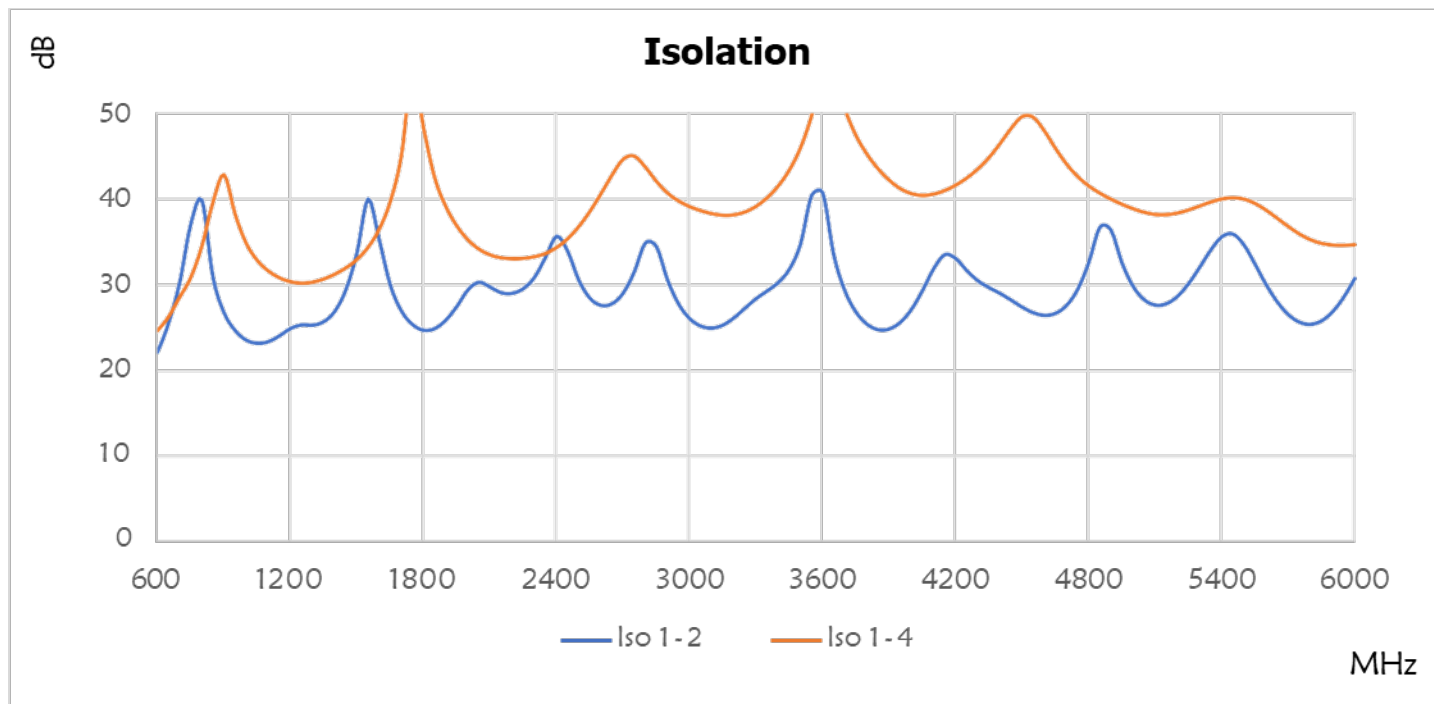
RoHS /REACH Compliant <sup>3</sup>	Yes
Enclosure	Aluminum
Connectors	Brass, Gold Plated
Contacts	Be Cu, Gold Plated
Insulators	PTFE
Finish	Gray Paint

1. All output ports should be terminated in a 50-ohm load with 1.2:1 max VSWR.
2. Electrical specifications at +25 °C only.
3. To the best of our knowledge at the time of publication.
4. Non-RoHS solder is available upon request.

**Typical Performance at +25 °C**



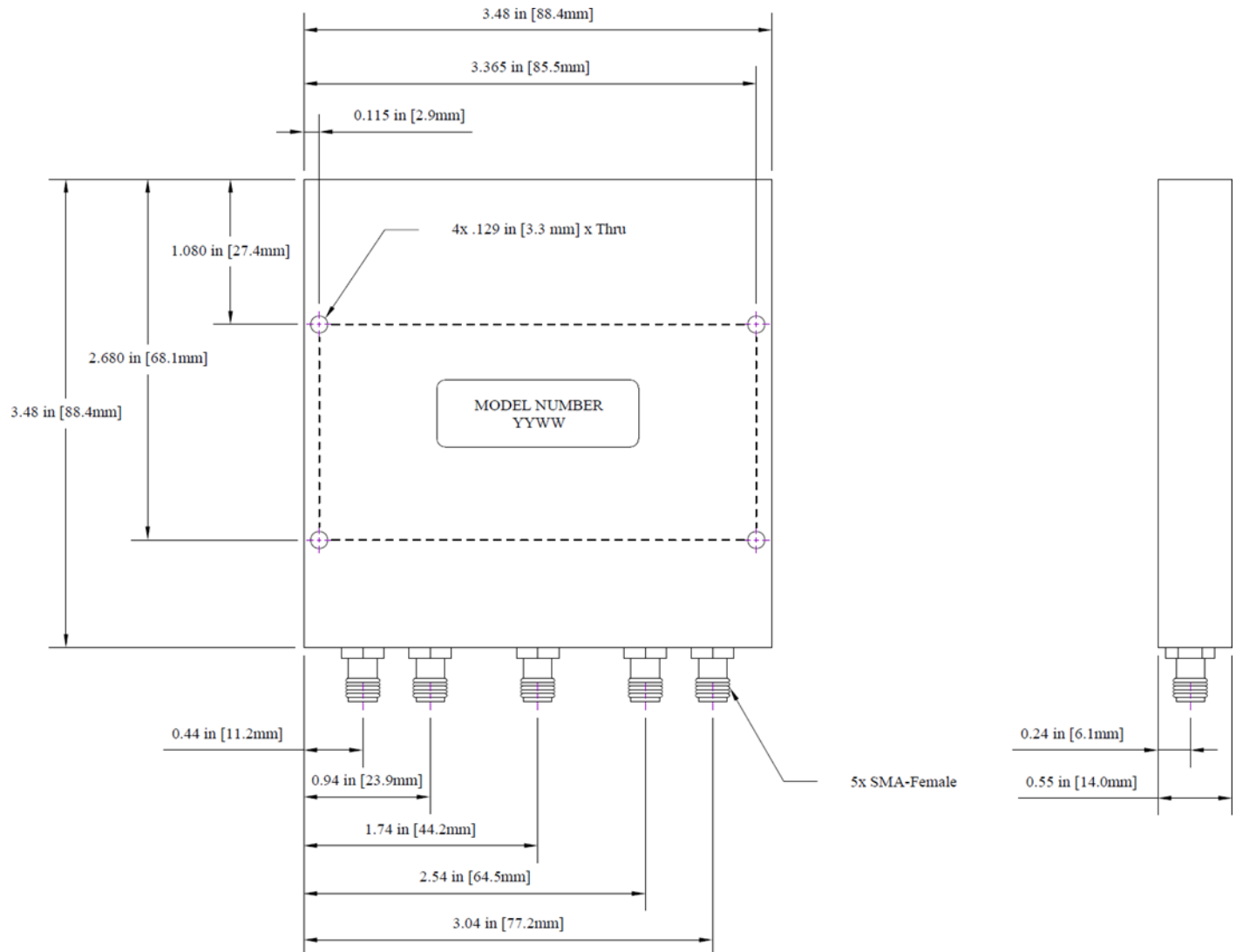
**Typical Performance at +25 °C**



### Typical Performance Data at +25 °C

Frequency (MHz)	Return Loss (dB)			Total Loss (dB)		Isolation (dB)	
	Port 5	Port 1	Port 4	S-1	S-4	1-2	1-4
500	19.2	46.5	43.6	6.23	6.22	18.6	22.7
550	16.6	39.5	38.4	6.28	6.28	20.2	23.6
600	15.7	33.8	33.4	6.31	6.31	22.3	24.8
650	15.9	30.2	30.2	6.31	6.31	25.7	26.4
700	16.8	28.5	28.6	6.27	6.30	30.4	28.7
750	18.8	27.6	28.0	6.25	6.26	37.2	31.0
800	21.4	27.2	27.8	6.24	6.24	40.0	34.6
850	24.6	27.9	28.7	6.22	6.23	31.0	39.7
900	26.5	29.2	30.3	6.22	6.23	26.9	43.0
950	26.2	31.3	32.8	6.23	6.24	24.8	38.4
1000	25.4	34.1	36.0	6.23	6.24	23.7	35.0
1500	26.3	29.8	30.9	6.29	6.29	33.9	33.1
2000	39.3	39.4	43.4	6.33	6.32	29.5	35.4
2500	28.9	37.5	36.0	6.38	6.36	30.7	36.9
3000	19.9	31.2	29.6	6.48	6.46	26.2	39.2
3500	27.6	32.8	33.1	6.49	6.46	34.9	46.1
4000	21.7	26.6	26.3	6.56	6.52	27.3	40.8
4500	25.7	31.2	30.3	6.59	6.54	27.5	49.7
5000	23.5	34.1	33.2	6.65	6.59	29.9	39.0
5500	32.0	41.4	38.7	6.71	6.66	34.8	40.1
6000	22.2	27.4	27.0	6.81	6.73	30.9	34.8

## Outline Dimensions



Dimensions are in inches, [mm] shown for convenience.  
Tolerances on 2-pl decimals:  $\pm .03$ . 3-pl decimals:  $\pm .015$ .