

Wideband Power Divider 6-way SMA Female 2 to 18 GHz

## 6-way SMA Power Divider 2 to 18 GHz

### Product Description

AmpliTech offers a wide selection of High-Quality RF power dividers, featuring Wilkinson design. Model APTPD-6-02001800-SMA is a wideband 6-way in-line power divider that operates from 2 to 18 GHz in an aluminum enclosure measuring 6.00 x 4.00 x 0.38 inches. The device is RoHS compliant.

This is a “true” six-way split meaning it is not an eight-way with two of the ports terminated. This method provides better insertion loss and amplitude performance.

Specifications	Min	Typ	Max	Min
Frequency	2		18	GHz
Impedance		50		Ohm
Return Loss (Port S)	9.5	12		dB
Return Loss (Ports 1-6)	13	18		dB
Insertion Loss (Above 7.8 dB)		1.4	3.4	dB
Isolation	15	18		dB
Amplitude Balance		0.3	1.1	dB
Phase Balance		4	14	Degrees
Input Power (CW) <sup>1</sup>			30	Watts

### Mechanical

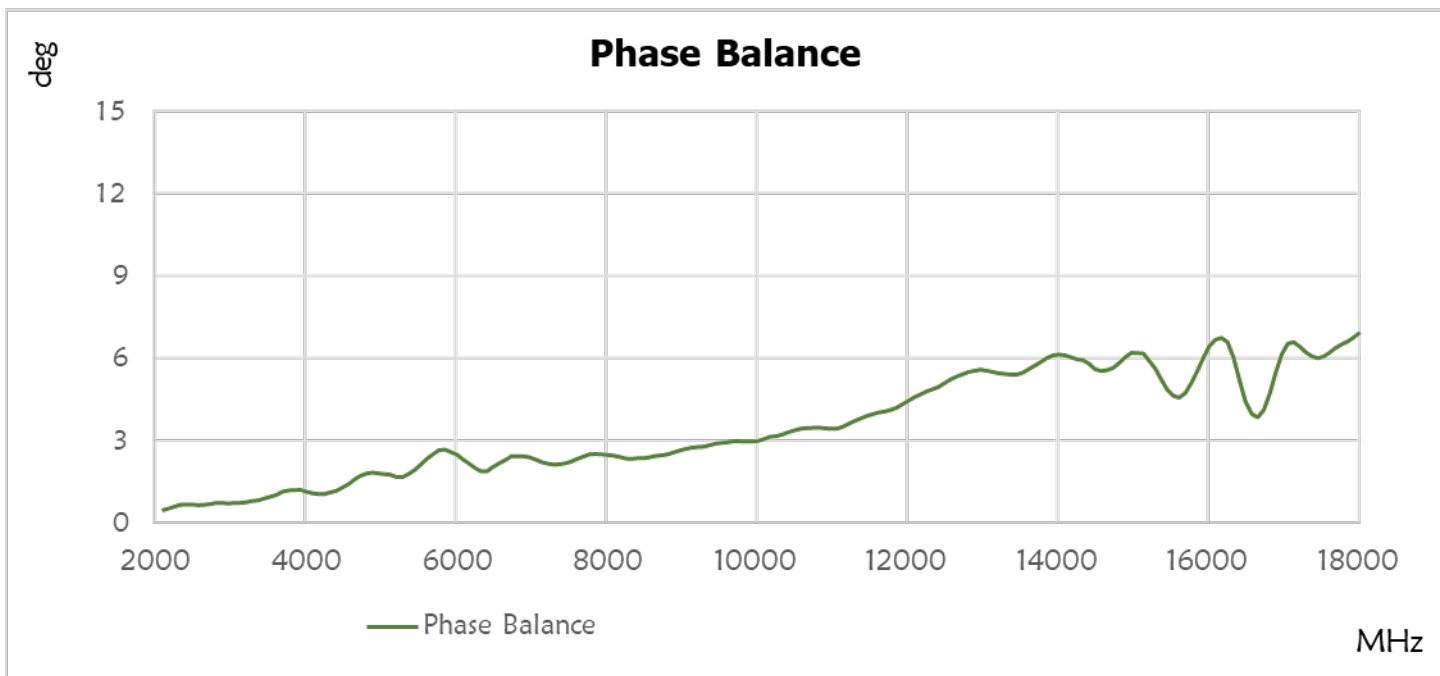
Connector Interface	SMA-Female
Operating Temperature <sup>2</sup>	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight Estimate	15 oz (425 g)
Humidity	10-90% non-condensing
Environment	Indoors Use Only

### Materials

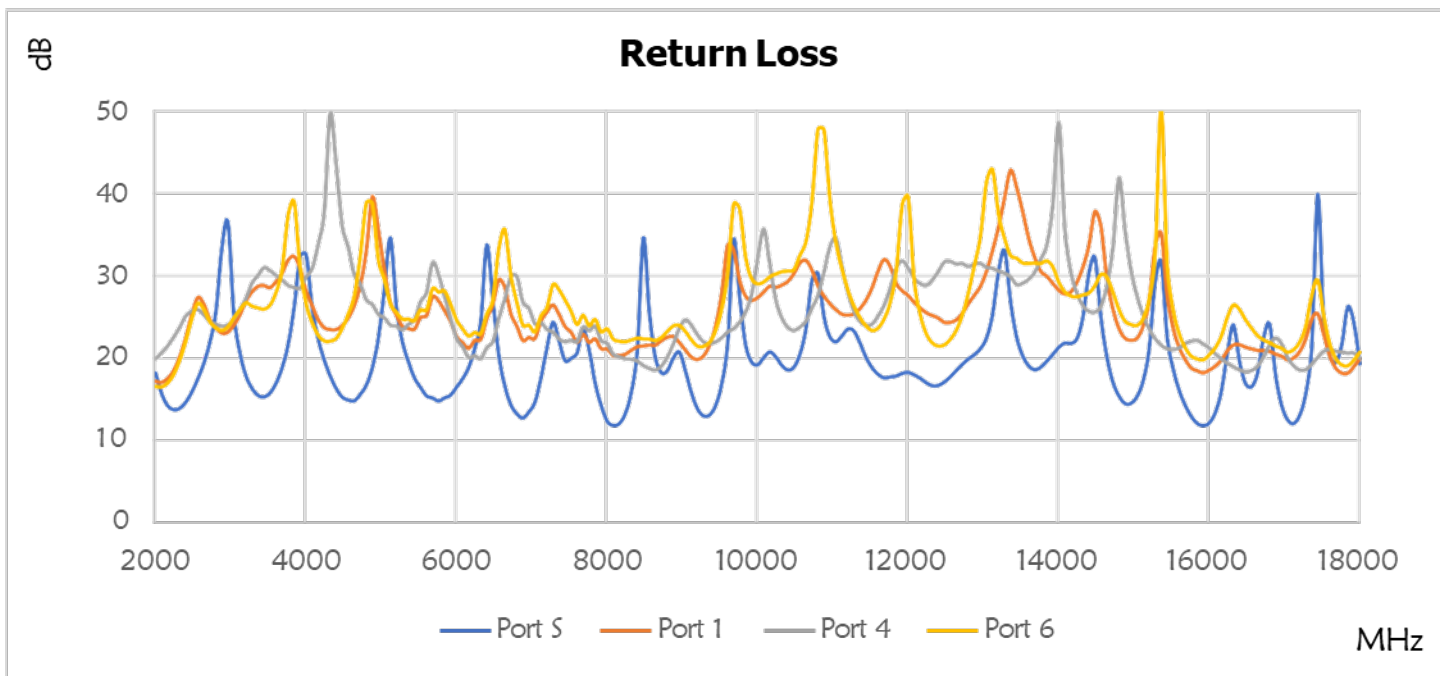
RoHS /REACH Compliant <sup>3</sup>	Yes
Enclosure	Aluminum
Connectors	Stainless Steel
Contacts	Be Cu, Gold Plated
Insulators	PTFE
Finish	Gray Paint

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**



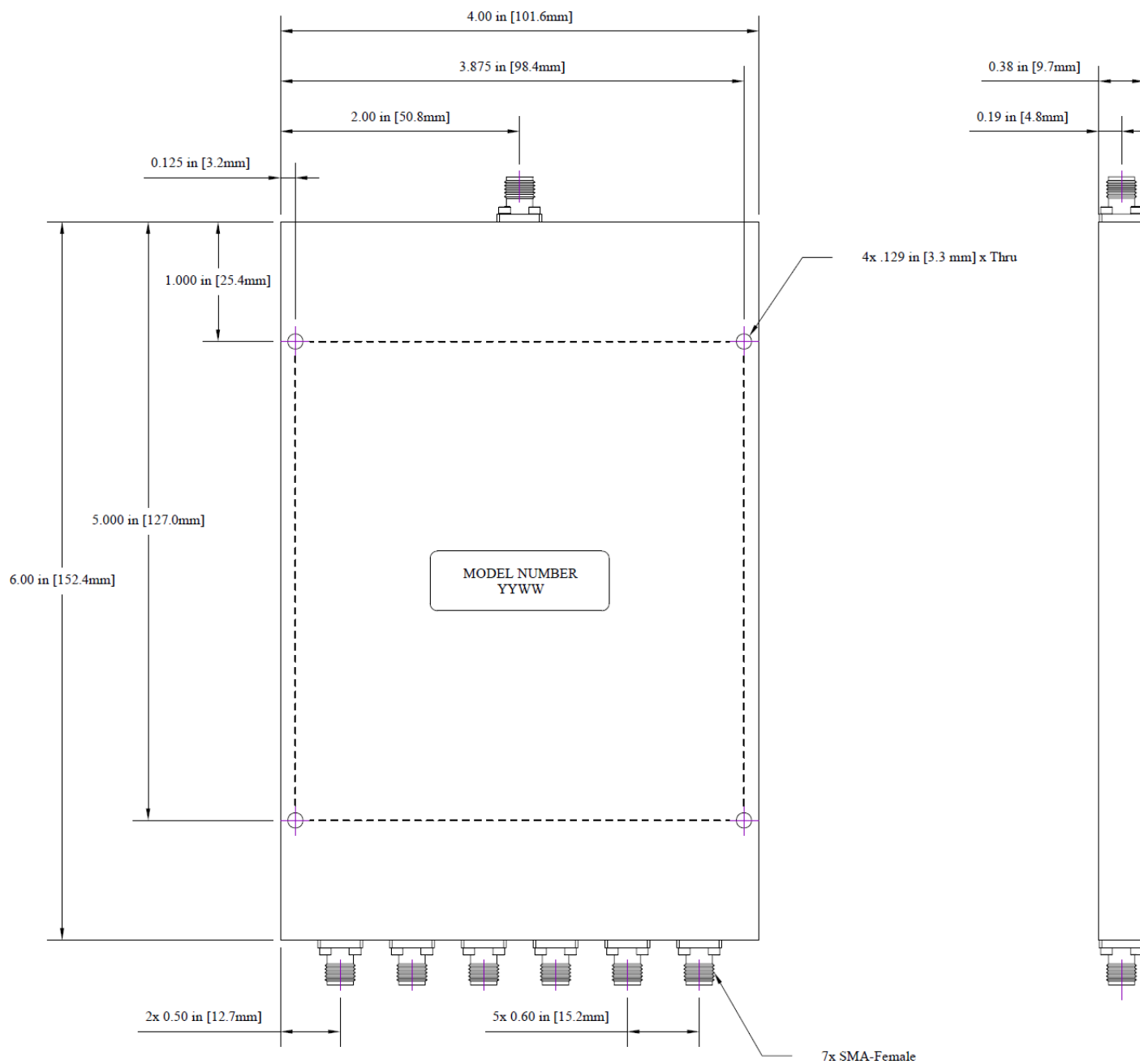
**Typical Performance at +25 °C**



## Typical Performance Data at +25 °C

Frequency (MHz)	Return Loss (dB)				Total Loss (dB)			Isolation (dB)		
	Port 5	Port 1	Port 4	Port 6	S-1	S-2	S-4	1-2	1-4	1-6
2000	18.3	17.3	20.0	16.7	8.11	8.10	8.14	23.95	29.23	28.75
2480	16.0	25.4	25.9	24.8	8.21	8.17	8.22	47.99	30.36	29.11
2960	36.7	23.3	24.2	23.9	8.11	8.07	8.11	23.59	31.34	30.97
3520	15.9	28.7	30.8	26.6	8.31	8.20	8.29	17.49	29.36	31.56
4000	32.7	28.3	30.0	26.8	8.18	8.14	8.17	23.67	30.30	30.59
4480	15.4	24.1	36.2	23.8	8.37	8.26	8.36	18.39	29.64	32.15
4960	22.6	35.8	25.4	32.0	8.29	8.24	8.30	27.96	29.43	35.47
5520	16.6	25.1	27.0	26.0	8.39	8.30	8.40	24.45	30.21	34.19
6000	16.6	22.8	22.5	24.8	8.42	8.45	8.39	20.96	31.49	36.59
6480	27.3	26.7	22.1	27.2	8.38	8.35	8.37	24.60	31.65	40.82
6960	13.6	22.7	26.2	24.1	8.59	8.62	8.56	18.95	31.77	44.26
7520	20.1	23.3	22.3	25.8	8.49	8.43	8.45	20.45	35.97	38.39
8000	12.5	21.3	21.9	23.7	8.73	8.71	8.67	21.23	30.12	34.79
8480	34.8	21.6	19.2	22.5	8.54	8.56	8.53	22.82	29.84	34.18
8960	20.9	22.0	23.8	24.1	8.68	8.68	8.64	25.17	32.45	39.60
9520	16.9	27.9	22.6	26.0	8.73	8.78	8.71	21.41	29.24	48.19
10000	19.3	27.5	32.2	29.2	8.76	8.83	8.73	22.84	31.48	56.56
10480	19.0	30.4	23.5	30.9	8.77	8.81	8.72	21.91	34.03	42.65
10960	22.7	26.7	33.7	39.3	8.75	8.81	8.71	25.74	33.92	38.90
11520	19.0	28.7	24.3	23.5	8.85	8.85	8.81	21.35	35.19	46.97
12000	18.4	27.7	31.1	39.8	8.97	8.90	8.92	36.47	30.88	46.41
12480	17.2	24.5	31.8	21.8	9.11	8.96	9.02	20.45	32.84	47.25
12960	21.3	28.9	31.6	35.0	8.97	8.93	8.96	27.95	33.84	44.14
13520	20.4	37.9	29.2	31.7	9.09	8.90	9.05	23.68	31.51	37.79
14000	21.4	28.4	48.8	29.4	9.16	8.95	9.10	23.97	33.07	38.52
14480	32.4	38.0	25.7	28.9	9.12	8.89	9.05	27.62	33.93	44.29
14960	14.7	22.3	30.8	24.2	9.44	9.18	9.37	21.44	31.19	48.31
15520	18.8	23.7	21.2	26.0	9.28	9.05	9.20	22.91	36.87	50.54
16000	12.3	18.7	21.4	20.6	9.85	9.58	9.69	21.58	34.64	38.05
16480	17.1	21.5	18.5	24.8	9.52	9.69	9.44	23.81	41.95	35.85
16960	14.4	20.4	21.9	21.3	9.85	9.91	9.79	21.43	37.10	42.04
17520	24.7	23.0	21.0	25.3	9.63	9.93	9.46	27.79	34.14	45.23
18000	19.4	20.1	20.1	20.9	9.83	10.25	9.65	21.00	47.15	35.70

## Outline Dimensions



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