

Wideband Power Divider 3-way SMA Female 6 GHz to 18 GHz

## 3-way SMA Power Divider From 6 to 18 GHz

### Product Description

AmpliTech offers a wide selection of High-Quality RF power dividers, featuring Wilkinson design. Model APTPD-3-06001800-SMA is a wideband 3-way in-line power divider that operates from 6 to 18 GHz and can handle 10 watts CW as a splitter.

Specifications	Min	Typ	Max	Min
Frequency	6		18	GHz
Impedance		50		Ohm
Return Loss (Port S)	9.5	14		dB
Return Loss (Port 1-3)	11.5	15		dB
Insertion Loss (Above 4.8 dB)		0.3	1.0	dB
Isolation	15	23		dB
Amplitude Balance		0.3	0.9	dB
Phase Balance		3.4	12	Degrees
Input Power (CW) <sup>1</sup>			10	Watts

### Mechanical

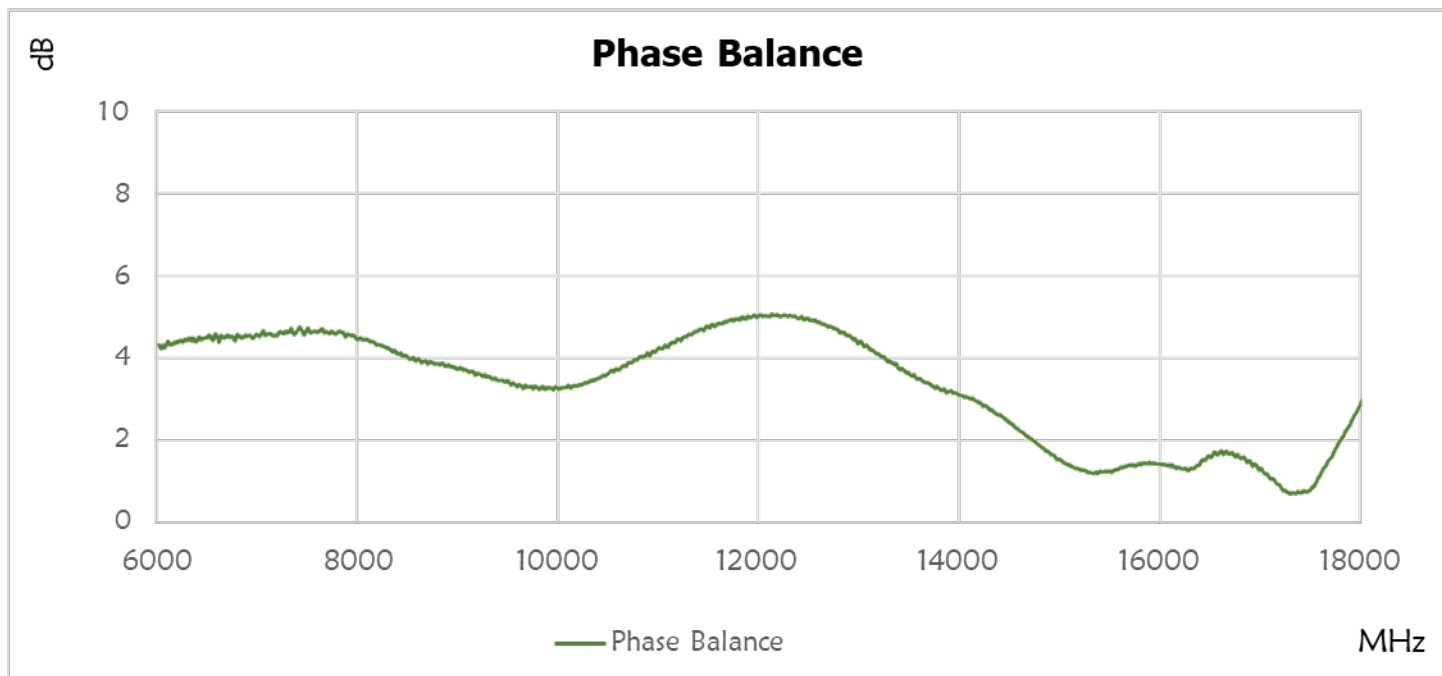
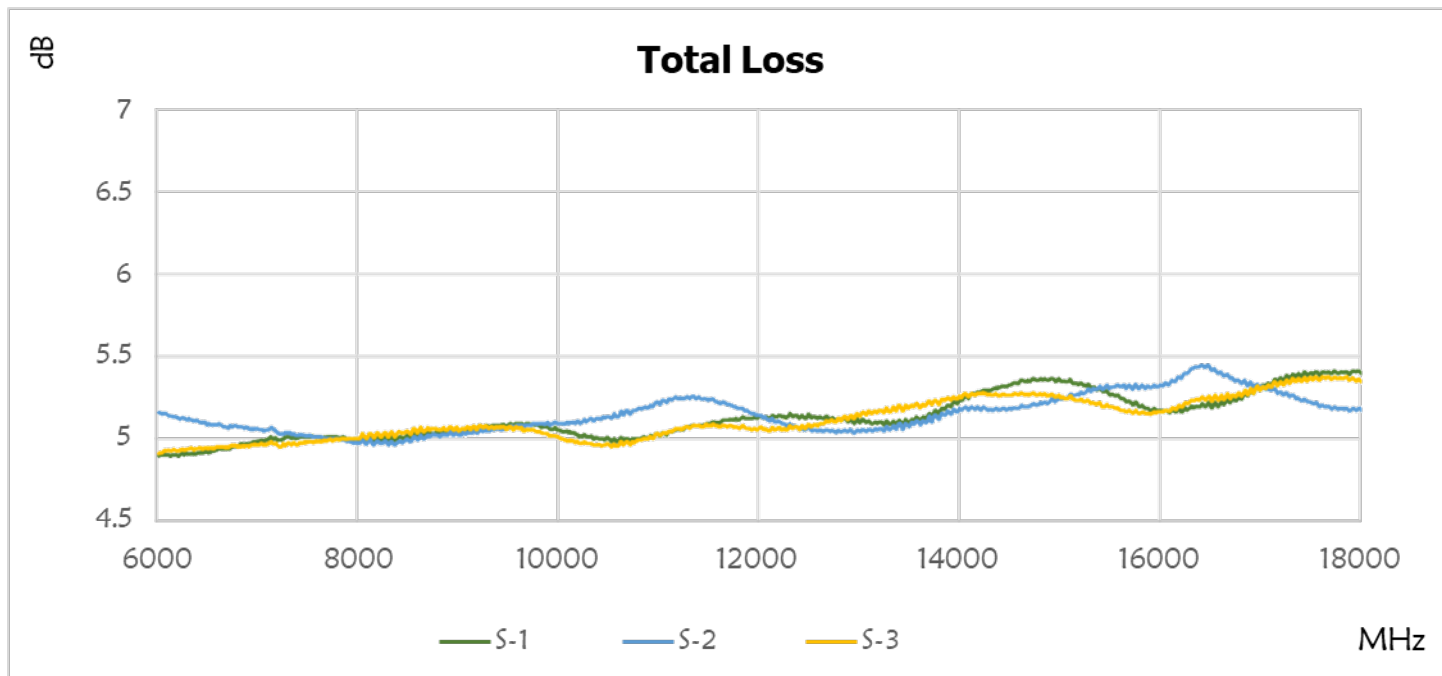
Connector Interface	SMA-Female
Operating Temperature <sup>2</sup>	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight Estimate	2 oz (57 g)
Humidity	10-90% non-condensing
Environment	Indoors Use Only

### Materials

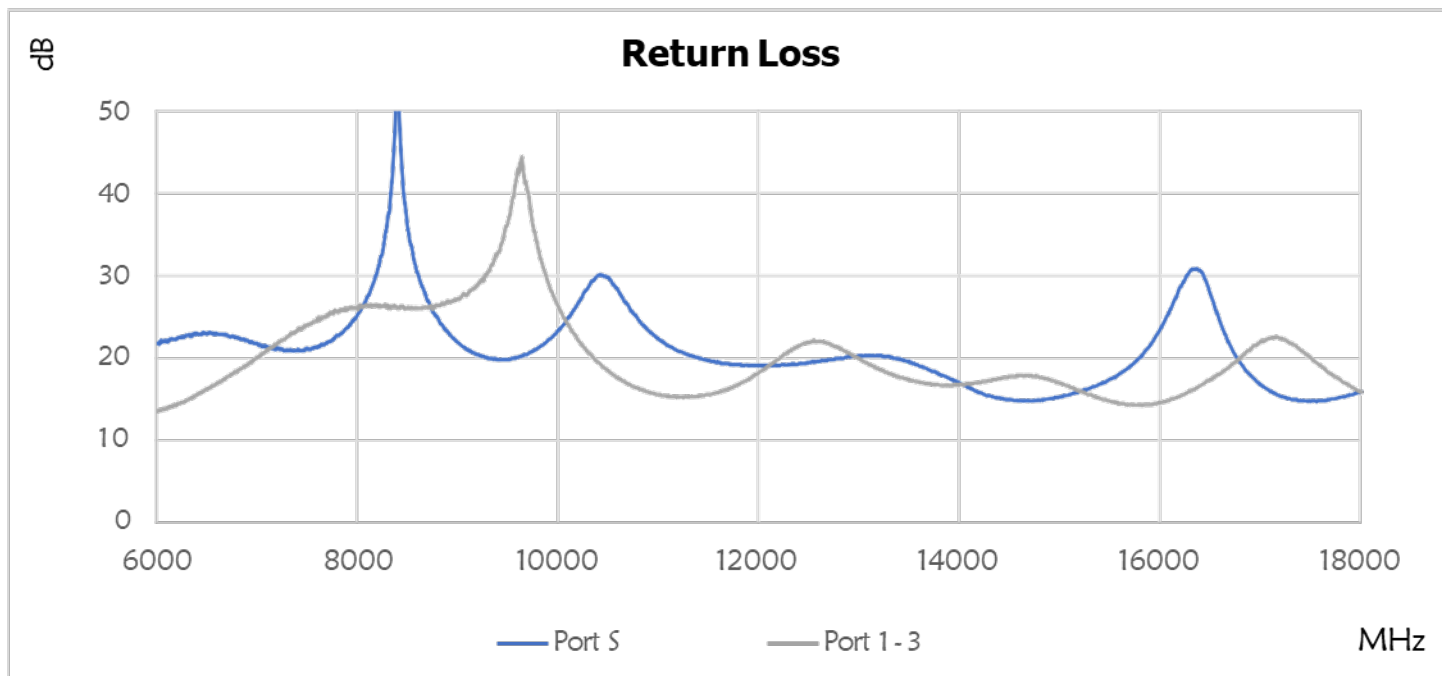
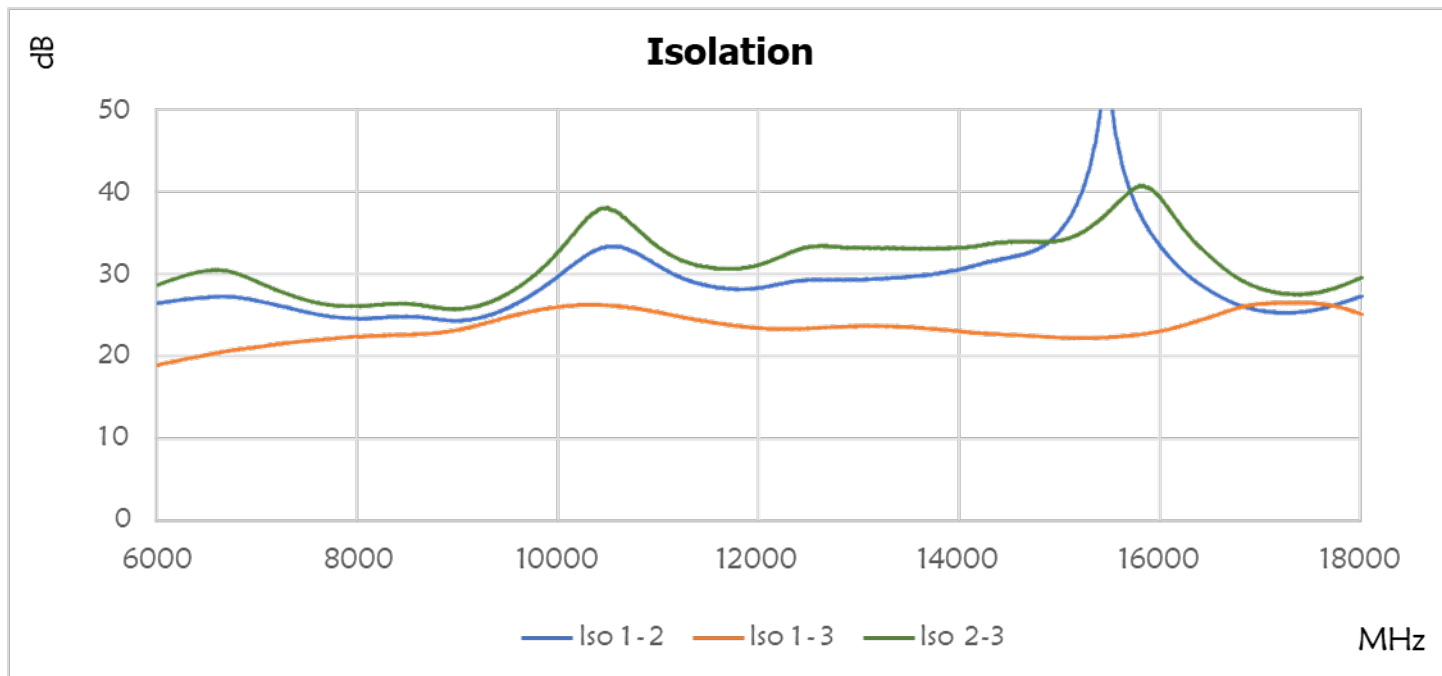
RoHS /REACH Compliant <sup>3</sup>	Yes
Enclosure	Aluminum
Connectors	Brass, Gold Plated
Contacts	Be Cu, Gold Plated
Insulators	PTFE
Finish	Gray Paint

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**



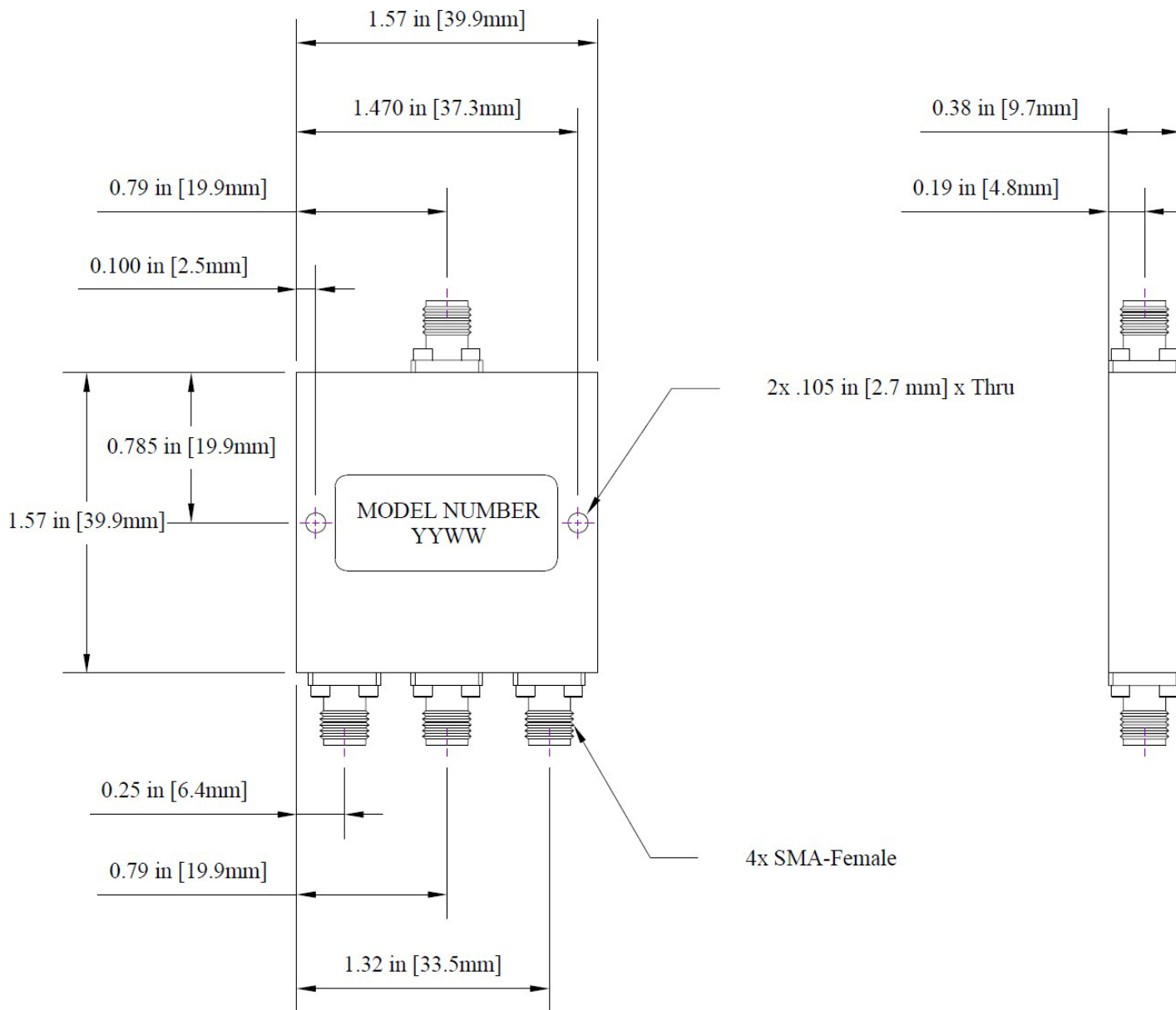
### Typical Performance at +25 °C



### Typical Performance Data at +25 °C

Frequency (MHz)	Return Loss (dB)			Total Loss (dB)		Isolation (dB)	
	Port 5	Port 1	Port 2	S-1	S-2	1-2	1-3
6000	21.9	24.3	13.7	4.90	5.17	26.5	19.0
6500	23.2	25.7	16.4	4.92	5.10	27.3	20.3
7000	21.9	28.2	20.2	4.99	5.06	26.8	21.2
7500	21.2	31.6	24.2	5.02	5.03	25.4	22.0
8000	25.6	23.6	26.1	5.00	4.98	24.7	22.5
8500	35.5	18.6	26.3	5.01	4.99	24.9	22.7
9000	22.0	16.2	27.3	5.05	5.03	24.4	23.3
9500	20.0	16.4	37.1	5.10	5.07	26.1	24.9
10000	23.6	19.8	26.3	5.06	5.10	29.9	26.1
10500	29.8	26.7	18.5	5.01	5.14	33.5	26.3
11000	22.4	19.3	15.7	5.02	5.21	31.0	25.4
11500	19.8	15.2	15.7	5.10	5.25	28.7	24.3
12000	19.2	13.9	18.5	5.15	5.15	28.4	23.5
12500	19.6	13.7	22.0	5.14	5.07	29.4	23.5
13000	20.4	14.0	20.0	5.11	5.05	29.4	23.8
13500	19.7	14.2	17.5	5.12	5.10	29.8	23.7
14000	17.1	14.2	17.0	5.24	5.18	30.7	23.1
14500	15.1	14.4	17.9	5.33	5.18	32.1	22.7
15000	15.4	15.4	17.1	5.35	5.24	35.5	22.4
15500	17.7	18.1	14.9	5.27	5.32	50.9	22.4
16000	23.9	21.0	14.8	5.18	5.33	33.3	23.2
16500	27.6	17.1	17.6	5.19	5.42	28.0	24.9
17000	16.8	14.8	22.3	5.33	5.33	25.7	26.5
17500	15.0	15.3	20.1	5.40	5.22	25.7	26.6
18000	16.1	16.0	16.1	5.40	5.18	27.4	25.2

## Outline Dimensions



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