

Wideband Power Divider 4-way SMA Female 500 MHz to 18 GHz

## 4-way SMA Power Divider 500 MHz to 18 GHz

### Product Description

AmpliTech offers a wide selection of High-Quality RF power dividers, featuring Wilkinson design. Model APTPD-4-00501800-SMA with excellent return loss, low insertion loss, and high isolation performance.

Specifications	Min	Typ	Max	Min
Frequency	0.5		18	GHz
Impedance		50		Ohm
Return Loss (Port S)	11	14		dB
Return Loss (Port 1-4)	13	18		dB
Insertion Loss (Above 6.02 dB)	500-8000 MHz	0.9	1.8	dB
	8000-12000 MHz		2.2	
	12000-18000 MHz		3.9	
Isolation	500-698 MHz	12	14	dB
	698-18000 MHz	15	20	
Amplitude Balance		0.3	1.9	dB
Phase Balance		2	18	Degrees
Input Power (CW) <sup>1</sup>			30	Watts

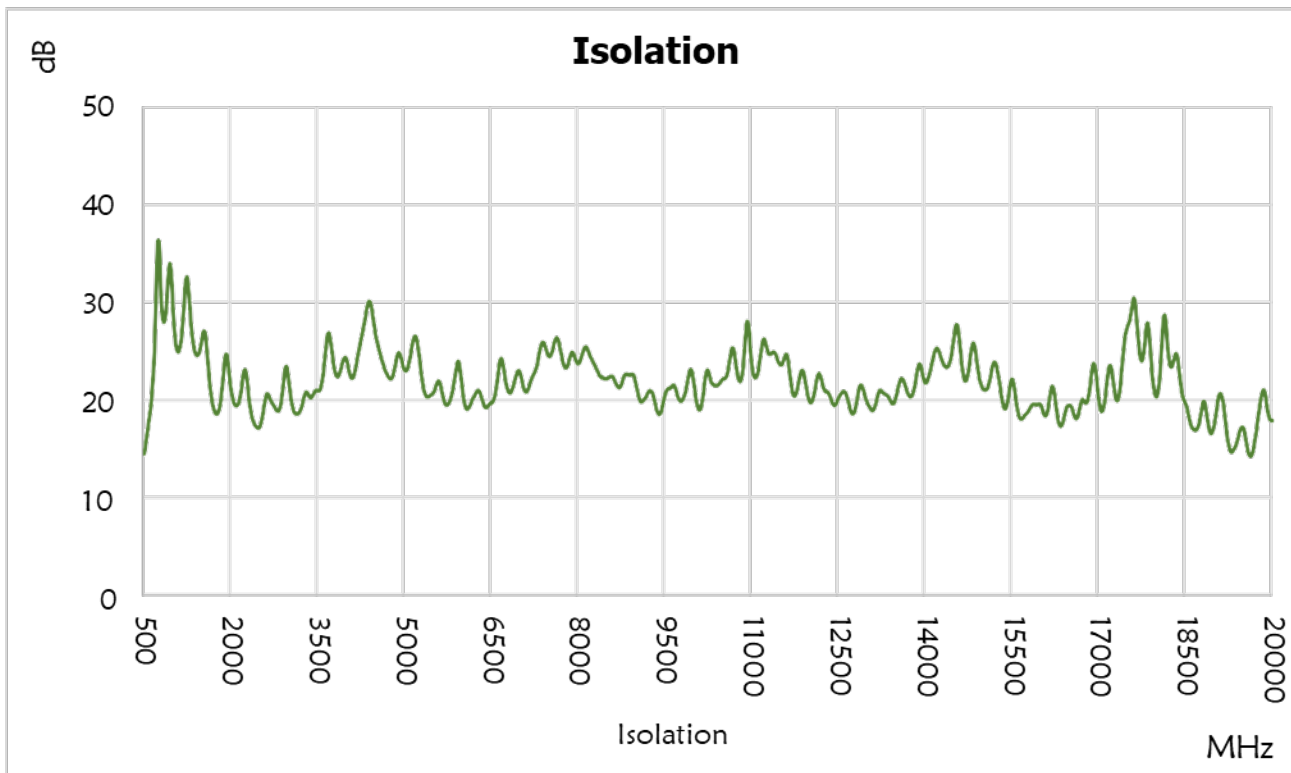
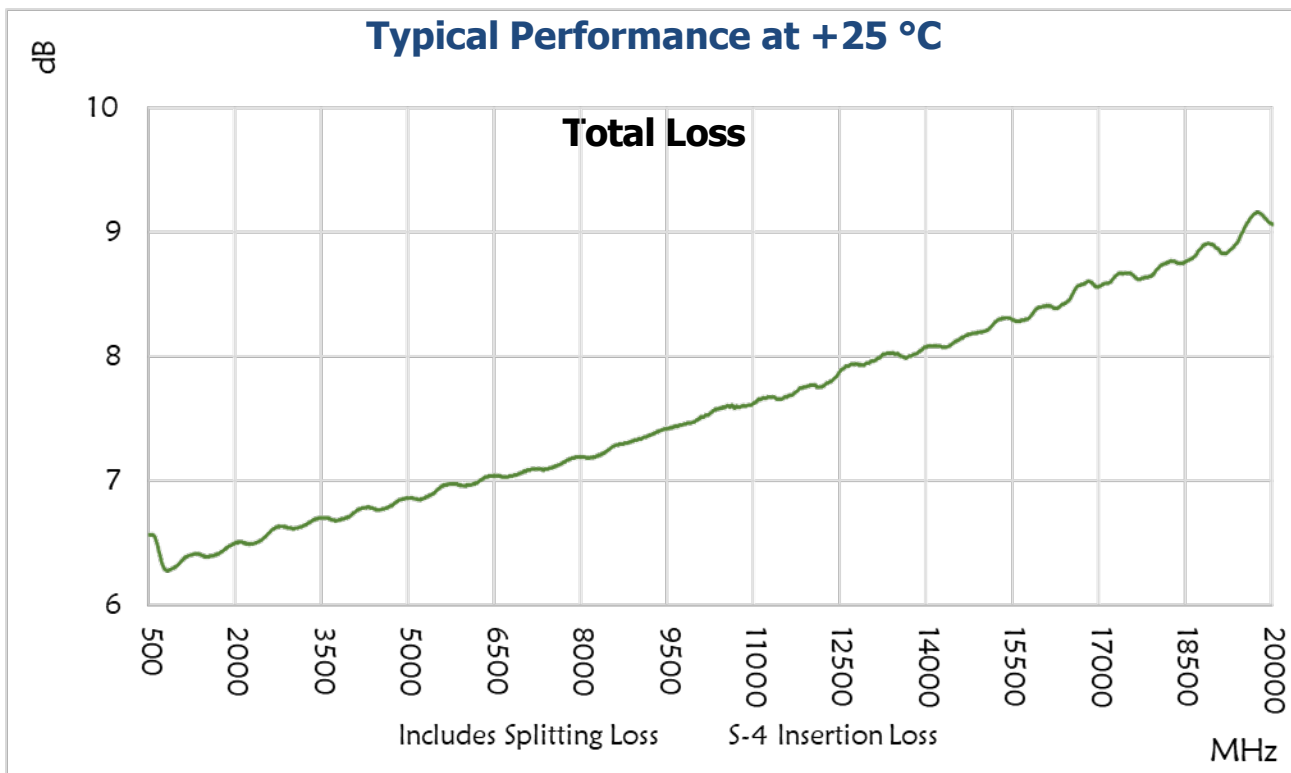
### Mechanical

Connector Interface	SMA-Female
Operating Temperature <sup>2</sup>	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight Estimate	14 oz (410 g)
Humidity	10-90% non-condensing
Environment	Indoors Use Only

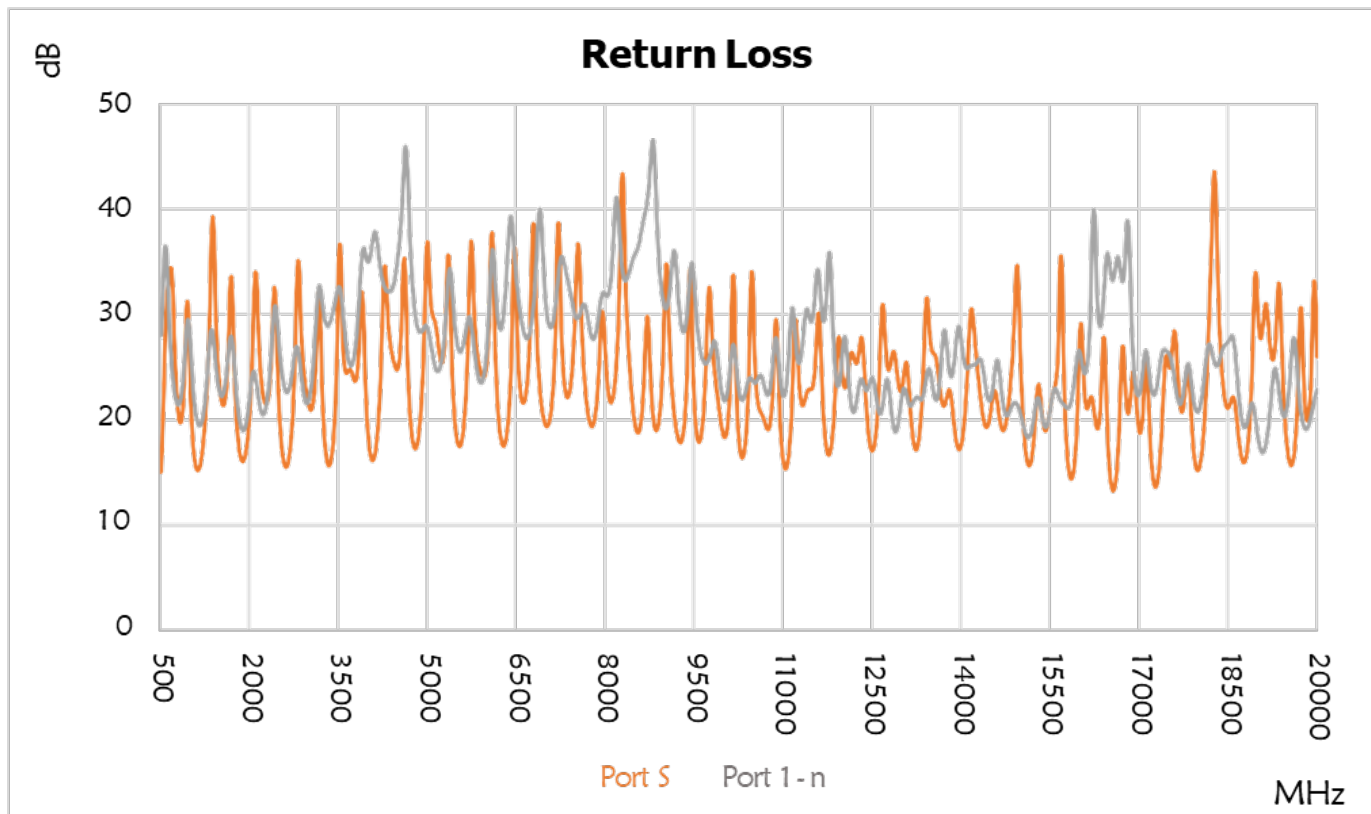
### Materials

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.



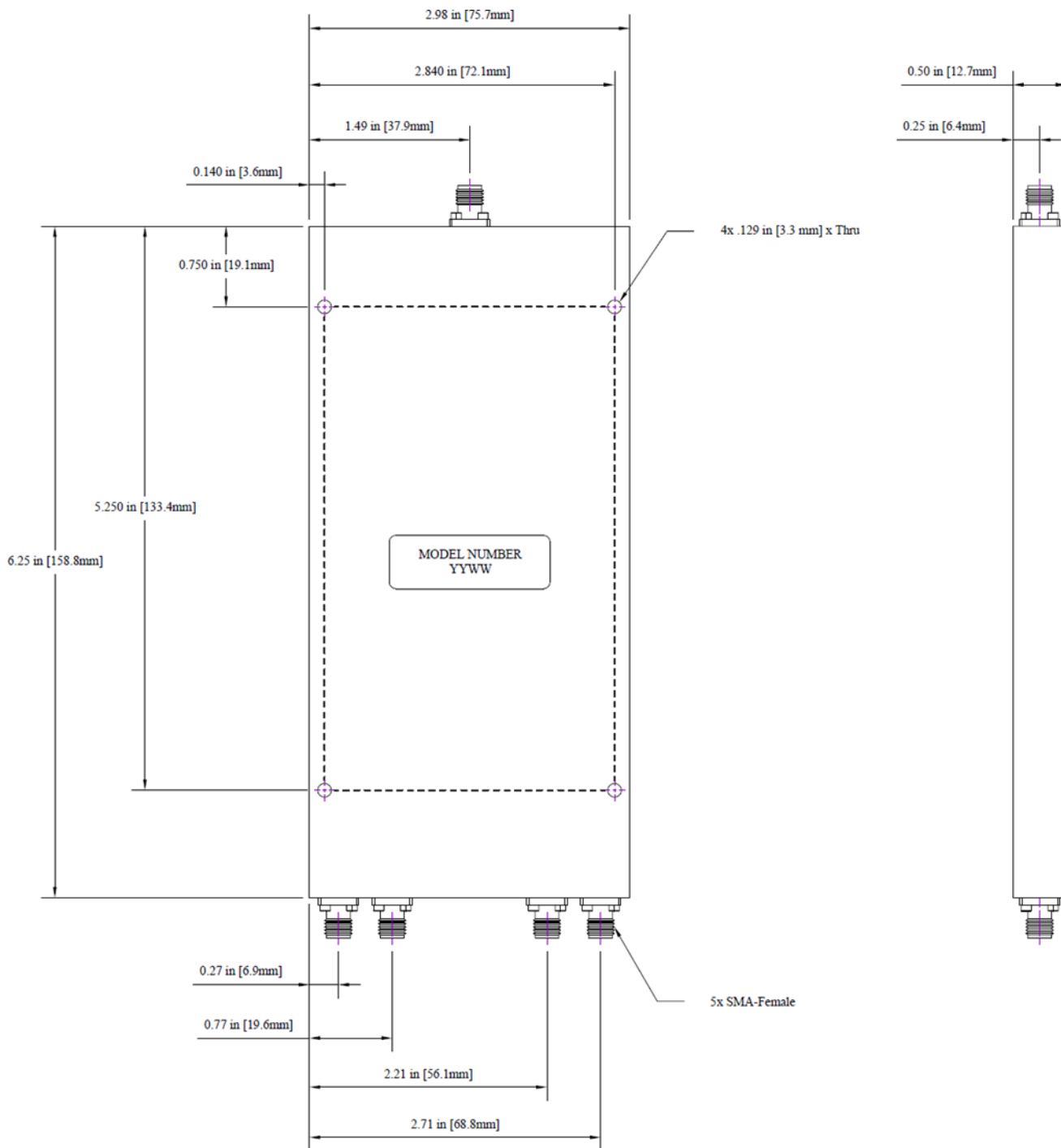
**Typical Performance at +25 °C**



### Typical Performance Data at +25 °C

Frequency (MHz)	Return Loss (dB)			Total Loss (dB)		Isolation (dB) 1-2
	Port 5	Port 1	Port 4	S-1	S-4	
500	19.8	33.4	19.8	6.3	6.3	15.4
1000	18.1	23.2	18.1	6.4	6.4	26.6
1500	21.4	22.3	21.4	6.4	6.3	27.3
2000	25.0	24.7	25.0	6.5	6.5	20.2
2500	17.4	24.4	17.4	6.7	6.7	17.8
3000	20.9	23.4	20.9	6.7	6.6	20.5
3500	33.5	32.0	33.4	6.7	6.7	20.9
4000	16.7	35.9	16.7	6.8	6.8	23.3
4500	26.2	37.7	26.2	6.8	6.8	25.9
5000	32.3	27.8	32.1	6.8	6.8	22.9
5500	17.5	26.5	17.5	7.0	7.0	21.2
6000	28.1	31.3	28.0	7.0	7.0	19.8
6500	24.3	31.3	24.4	7.0	7.0	19.8
7000	19.6	29.5	19.6	7.1	7.1	22.1
7500	39.7	29.8	40.0	7.2	7.2	24.6
8000	23.0	31.6	23.1	7.2	7.3	23.9
8500	18.7	36.2	18.7	7.4	7.4	22.3
9000	37.8	30.6	38.0	7.3	7.4	20.8
9500	18.8	29.6	18.8	7.5	7.5	21.0
10000	18.6	22.2	18.6	7.4	7.4	20.2
10500	23.3	23.6	23.3	7.8	7.7	22.3
11000	15.2	22.6	15.2	7.6	7.7	22.5
11500	24.7	32.1	24.8	7.7	7.7	23.7
12000	23.0	29.3	23.0	7.8	7.8	19.7
12500	17.6	23.4	17.6	7.9	7.9	20.6
13000	24.5	23.4	24.4	8.1	8.1	19.4
13500	26.4	22.3	26.4	7.9	7.9	21.4
14000	18.9	25.6	18.9	8.2	8.2	21.9
14500	22.5	23.3	22.6	8.1	8.1	28.1
15000	20.7	19.7	20.7	8.3	8.3	21.0
15500	22.6	22.6	22.6	8.3	8.3	21.6
16000	29.1	25.3	29.0	8.3	8.3	18.8
16500	13.6	33.2	13.6	8.8	8.8	19.3
17000	18.7	23.4	18.7	8.6	8.6	18.8
17500	25.0	26.0	25.1	8.6	8.6	28.2
18000	15.9	21.5	15.9	8.9	8.9	21.2
18500	21.6	27.9	21.5	8.8	8.7	18.9
19000	27.7	17.4	27.6	8.6	8.7	19.0
19500	16.0	23.5	16.0	9.3	9.3	16.1
20000	22.3	23.6	22.2	9.1	9.1	18.1

## Outline Dimensions



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