

Ultra-Wideband Power Divider 2-way SMA Female 500 MHz to 18 GHz

2-way N Power Divider From 500 MHz to 18 GHz

Product Description

AmpliTech offers a wide selection of High-Quality RF power dividers, featuring Wilkinson design. Model APTPD-2-00501800-SMA is an ultra-wideband 2-way in-line power divider that operates from 500 MHz to 18 GHz in a compact enclosure measuring 4.75 x 1.00 x 0.50 inches. This device is RoHS compliant.

Specifications	Min	Typ	Max	Min
Frequency	0.5		18	GHz
Impedance		50		Ohm
Return Loss (Port S)	11	15		dB
Return Loss (Ports 1-2)	11	18		dB
Insertion Loss (Above 3.0 dB at 8 GHz)		0.5	1.1	dB
Insertion Loss (Above 3.0 dB at 12 GHz)		0.7	1.4	dB
Insertion Loss (Above 3.0 dB at 18 GHz)		1.1	1.9	dB
Isolation (500-700 MHz)	12	16		dB
Isolation (700 MHz-18 GHz)	15	20		dB
Amplitude Unbalance			0.9	dB
Phase Unbalance			10	Degrees
Input Power (CW) ¹			20	Watts

Mechanical

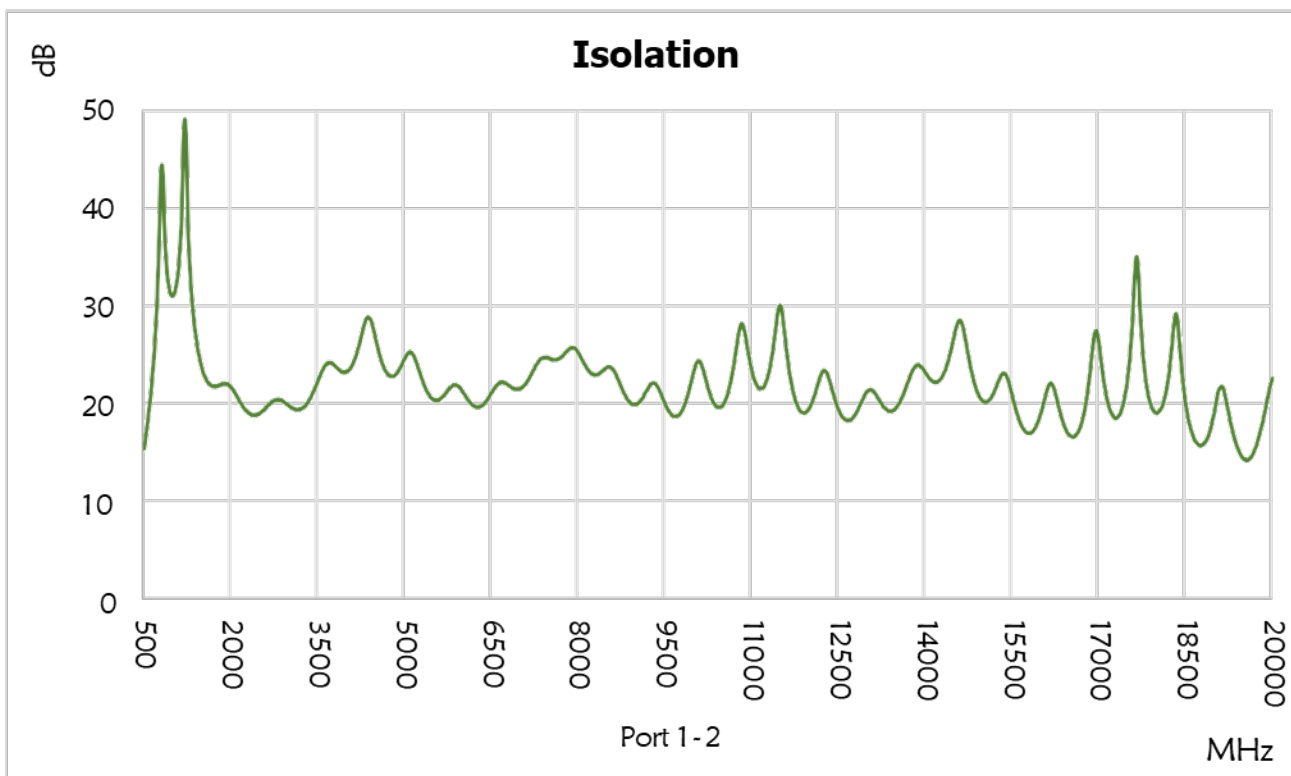
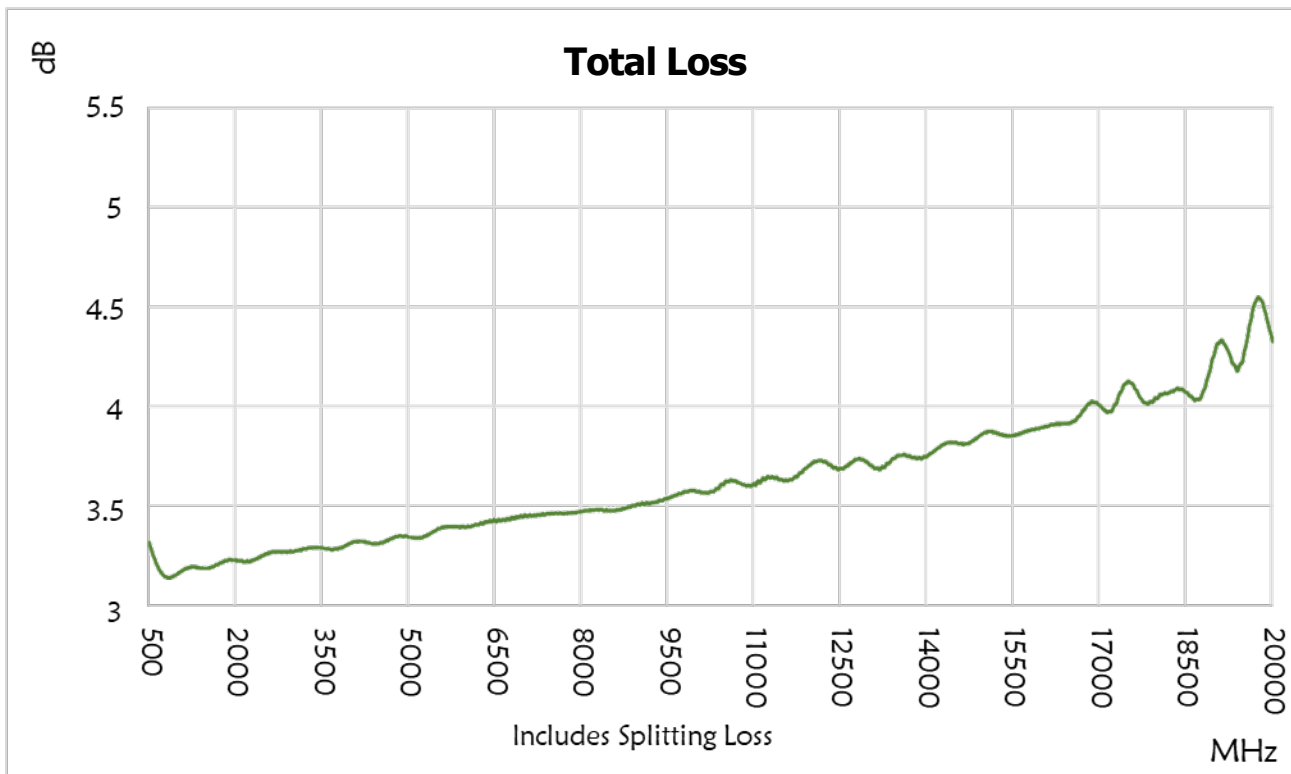
Connector Interface	SMA-Female
Operating Temperature ²	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight Estimate	3.7 oz (105 g)
Humidity	10-90% non-condensing
Environment	Indoors Use Only

Materials

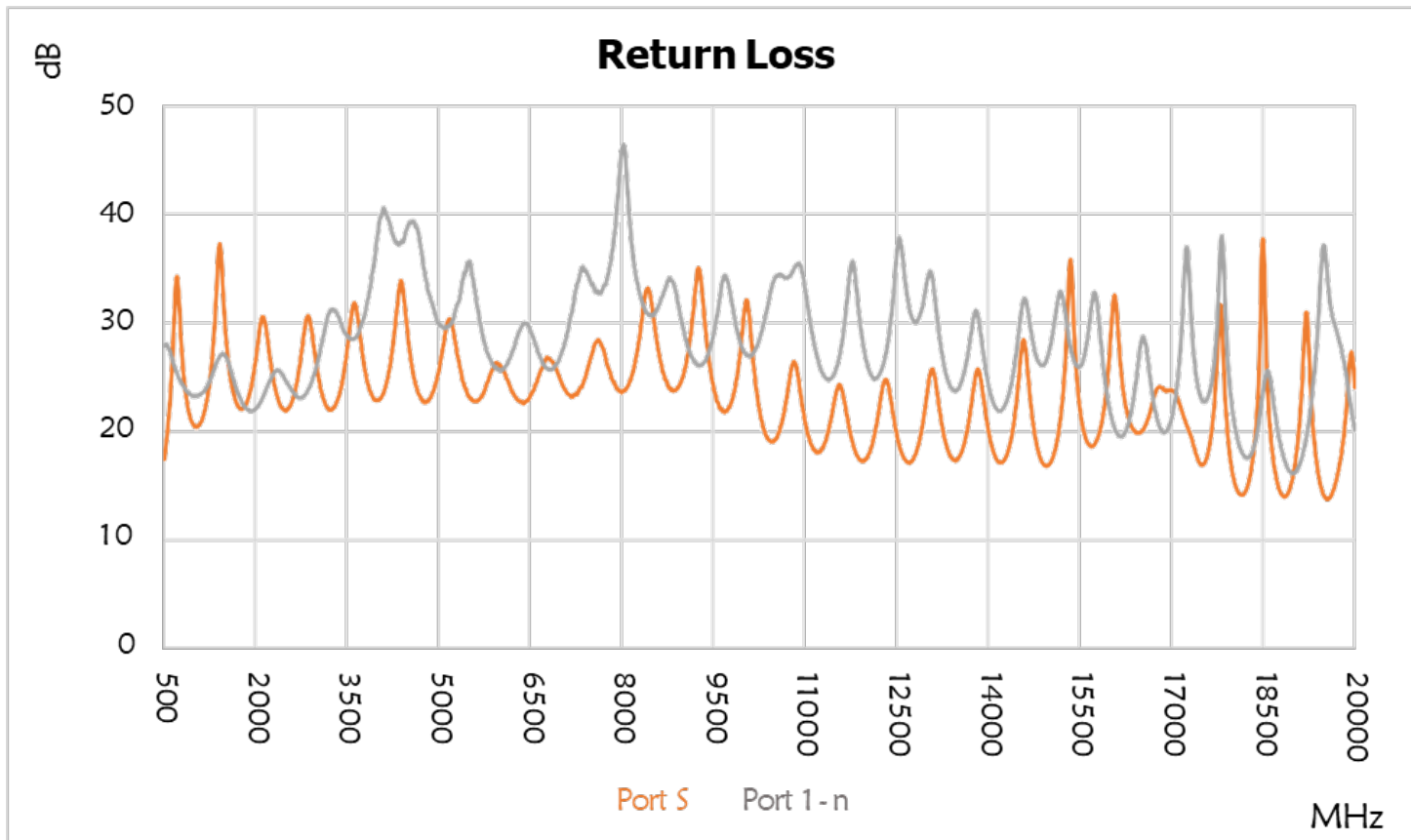
RoHS /REACH Compliant ³	Yes
Enclosure	Aluminum
Connectors	Stainless Steel
Contacts	Be Cu, Gold Plated
Insulators	PTFE
Finish	Gray Paint

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



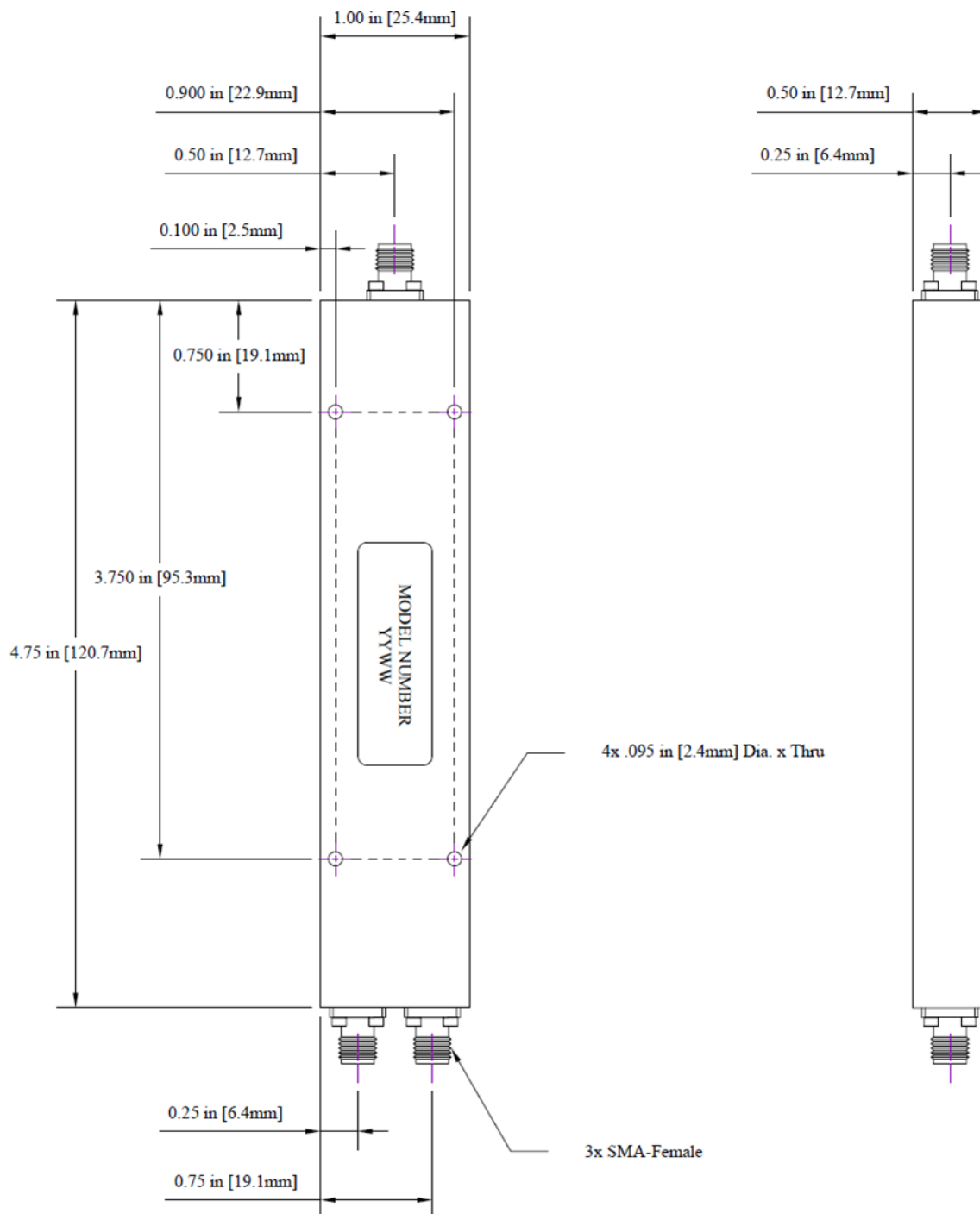
Typical Performance at +25 °C



Typical Performance Data at +25 °C

Frequency (MHz)	Return Loss (dB)			Total Loss (dB)		Isolation (dB) 1-2
	Port 5	Port 1	Port 2	S-1	S-2	
500	19.1	28.0	28.0	3.2	3.1	16.6
1000	20.5	23.4	23.7	3.2	3.2	31.4
1500	27.1	26.8	27.1	3.2	3.1	23.1
2000	28.5	22.4	22.2	3.2	3.3	21.6
2500	22.4	24.6	23.9	3.4	3.4	19.3
3000	24.6	27.3	26.7	3.2	3.2	19.7
3500	29.3	28.6	27.9	3.3	3.3	22.8
4000	22.9	37.6	39.6	3.3	3.3	23.4
4500	26.9	40.7	47.0	3.3	3.3	26.0
5000	27.0	30.0	28.7	3.3	3.3	25.0
5500	22.9	34.5	36.3	3.4	3.4	20.4
6000	25.8	25.4	27.2	3.5	3.5	21.2
6500	22.9	28.9	29.4	3.3	3.4	21.4
7000	23.8	27.2	28.5	3.5	3.5	21.8
7500	27.8	32.9	35.1	3.5	3.5	24.6
8000	23.8	47.9	35.3	3.5	3.5	25.1
8500	29.8	31.1	34.4	3.5	3.5	24.0
9000	26.4	29.0	30.8	3.4	3.4	20.0
9500	23.0	29.9	32.3	3.5	3.5	19.6
10000	32.6	27.0	31.2	3.6	3.6	24.2
10500	19.7	34.8	27.6	3.7	3.7	20.3
11000	20.0	31.7	25.1	3.6	3.6	22.6
11500	24.2	26.3	32.3	3.6	3.7	29.3
12000	17.7	25.5	31.2	3.9	3.8	20.1
12500	18.8	37.6	27.1	3.7	3.8	19.1
13000	25.3	35.0	29.0	3.7	3.7	21.5
13500	17.8	24.2	25.7	3.7	3.8	20.0
14000	19.1	23.3	23.3	3.9	3.9	23.0
14500	27.5	31.3	38.9	3.8	3.9	27.9
15000	17.4	28.6	30.7	3.9	4.0	20.2
15500	20.7	26.3	25.3	3.9	4.0	20.2
16000	32.0	20.9	19.3	3.9	4.0	19.9
16500	20.2	28.9	27.3	4.0	4.1	16.7
17000	23.8	22.2	23.5	4.0	4.1	24.6
17500	17.0	22.7	21.5	4.0	4.2	24.7
18000	15.3	20.4	18.1	4.1	4.3	19.3
18500	29.7	25.5	22.6	4.0	4.1	18.7
19000	17.5	16.3	16.4	4.5	4.6	20.7
19500	13.9	35.3	25.1	4.6	4.8	14.4
20000	21.4	19.2	22.0	4.3	4.4	23.0

Outline Dimensions



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