WERBEL MICROWAVE LLC
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SMA 3-way Power Divider 6 to 18 GHz — D-3186

Description

Werbel Microwave designs and manufactures a wide selection of power dividers, combiners and splitters. These components are used in RF systems to combine multiple signals or split into multiple signals of equal magnitude and phase. Werbel Microwave offers designs of Wilkinson, resistive, ferrite and reactive technology and are among the highest performance in the industry.

The D-3186 is a 3-way Wilkinson divider that operates from 6 to 18 GHz and can handle up to 10 watts CW as a splitter. It is part of Werbel Microwave's catalog of splitters that offer a wide range of port count and frequency ranges.



Image is representative.

Specification	Min.	Typ.	Max.	Units
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)[1]			10	Watts

Mechanical

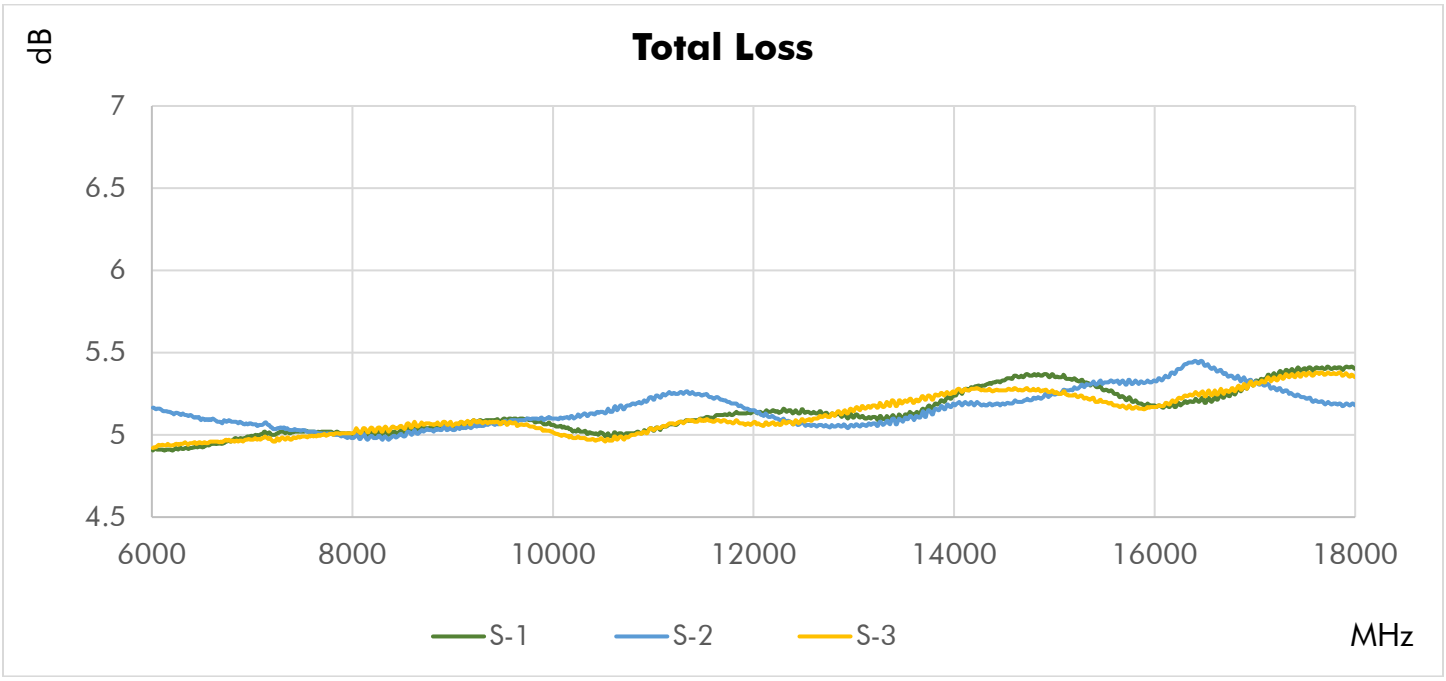
Connector Interface	SMA-Female
Operating Temperature[2]	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight Estimate	2 oz (57 g)
Humidity	10-90% non-condensing
Environment	Indoors Use Only
CAGE Code	78YZ0

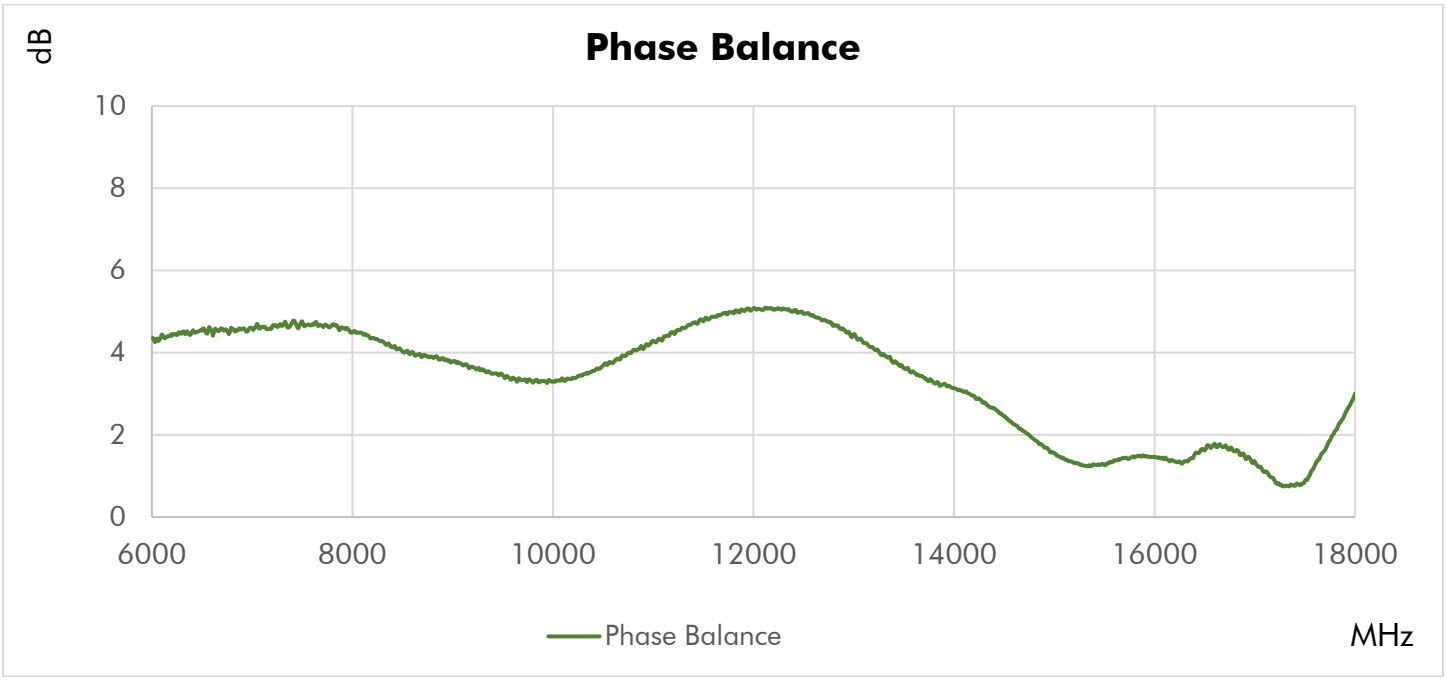
Materials

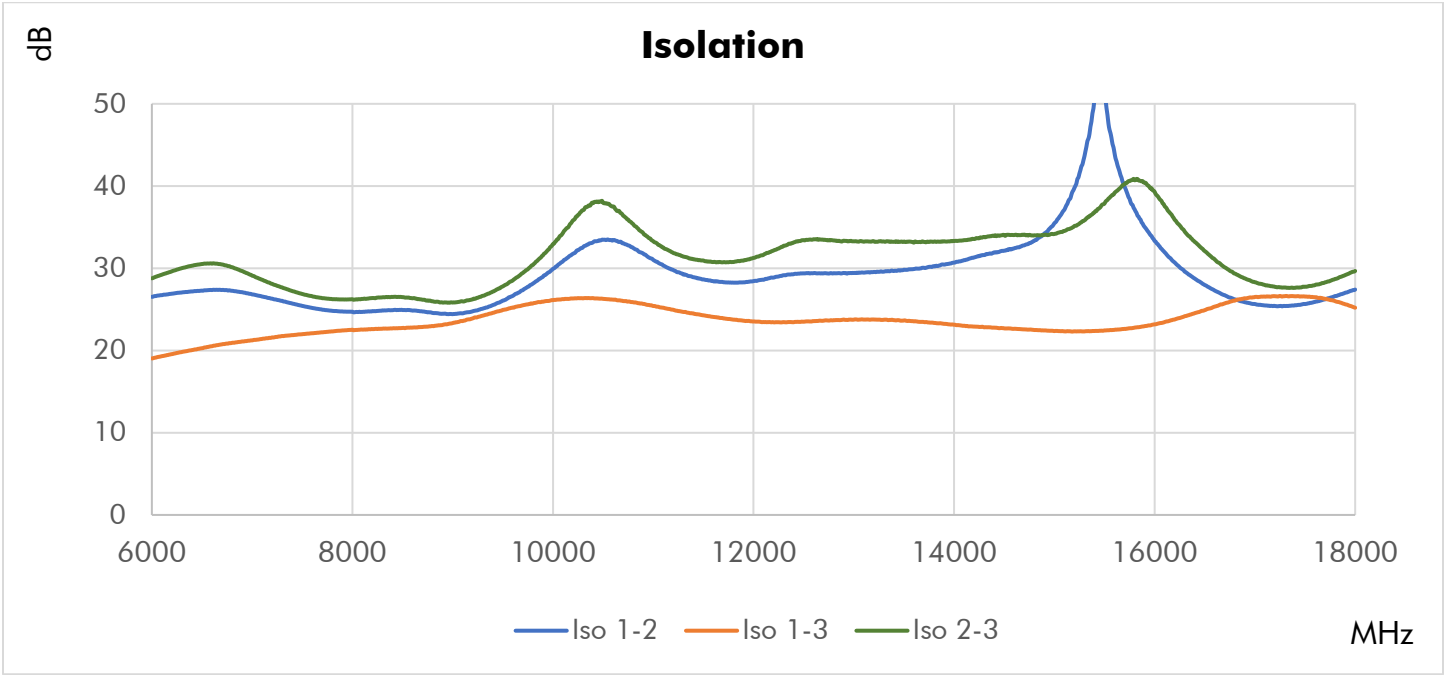
RoHS Compliant[3]	Yes
REACH Compliant[3]	Yes
Enclosure	Aluminum
Connectors	Brass, Gold Plated
Contacts	Be Cu, Gold Plated
Insulators	PTFE
Finish	Gray Paint

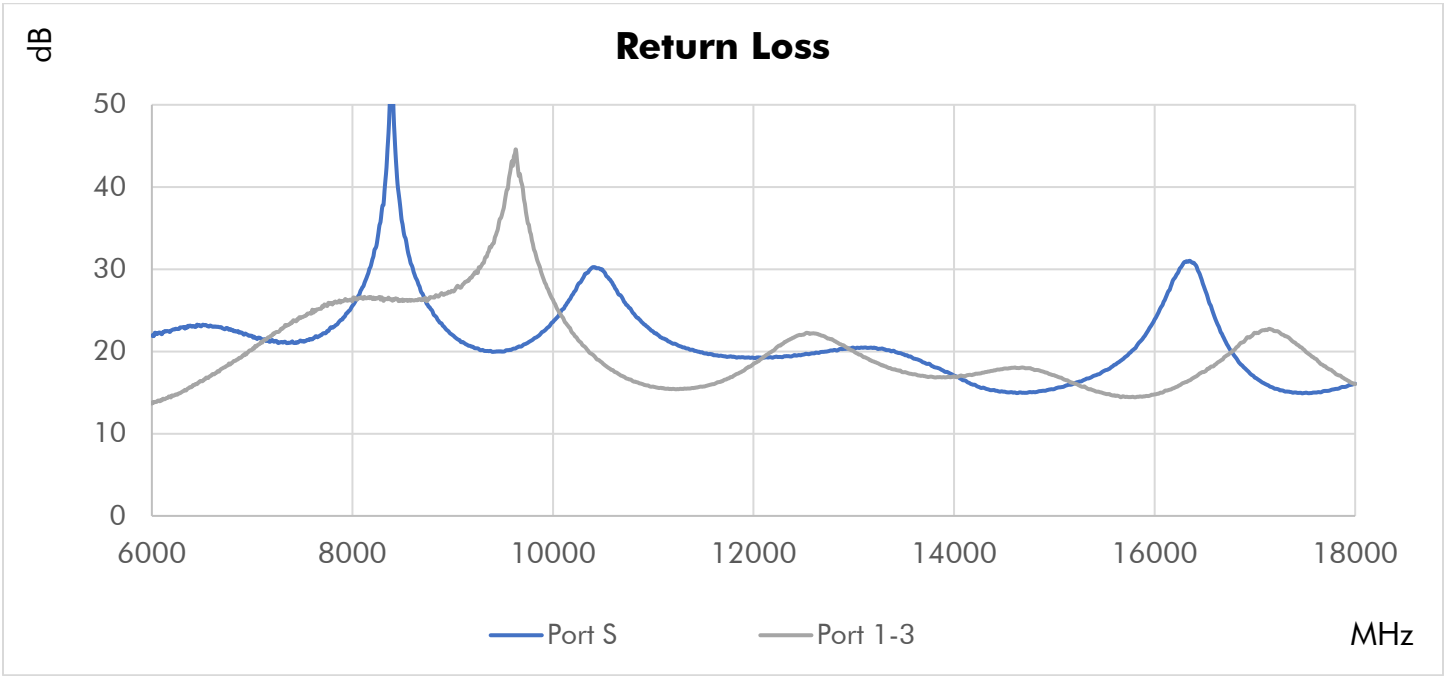
1. All output ports should be terminated in a 50-ohm load with 1.2:1 max VSWR.
2. Electrical specification at +25 °C.
3. To the best of our knowledge at time of publication.

Typical Performance at +25 °C





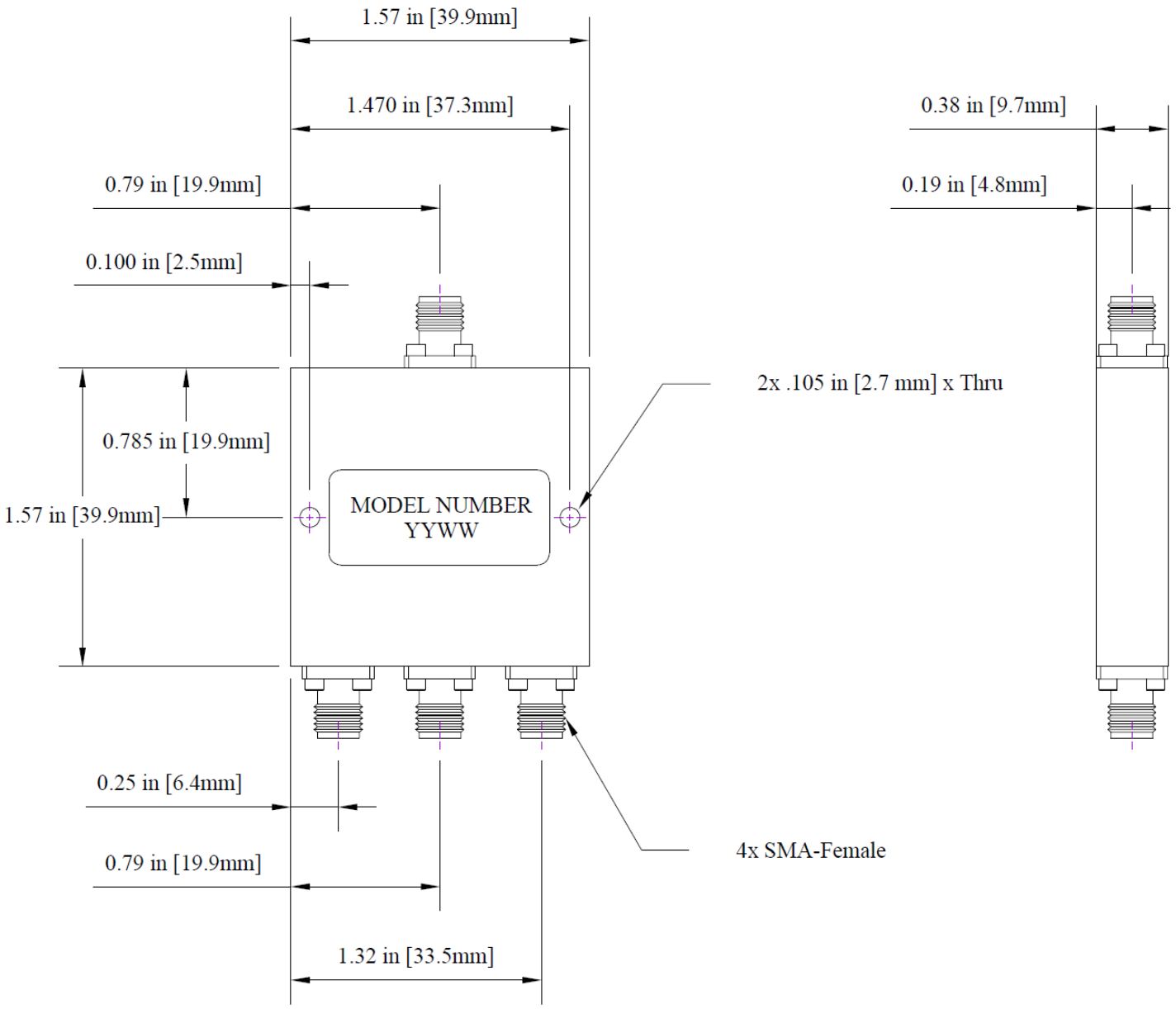

Isolation
dB
50
40
30
20
10
0
6000
8000
10000
12000
14000
16000
18000
Iso 1-2
Iso 1-3
Iso 2-3
MHz


Return Loss
dB
50
40
30
20
10
0
6000
8000
10000
12000
14000
16000
18000
Port S
Port 1-3
MHz

Typical Performance Data

Frequency (MHz)	Return Loss (dB)			Total Loss (dB)		Isolation (dB)	
	Port S	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



Outline drawing: OL-3186
Dimensions are in inches, [mm] shown for convenience.
Tolerances on 2-pl decimals: ±.03. 3-pl decimals: ± .015.

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