

Power Divider, 4-way, 4-18 GHz, SMA Female

ESAT-4PD0418S

Description

ESAT-4PD0418S is a 4-way in-line power splitter covering the continuous bandwidth of 4 to 18 GHz in a compact enclosure measuring 1.98 x 1.46 x 0.38 inches. The device is RoHS compliant. There exist two through mounting holes for top-down bolting to a chassis. The SMA female connectors are stainless steel for durability and ruggedness. Typical insertion loss is only 0.7dB. Isolation 21dB typical between output ports. Esatcom Inc.'s unique design approach results in a compact device covering C band, X band and Ku band with very low insertion loss. In production since 2016. Designed, assembled, and tested in the USA.

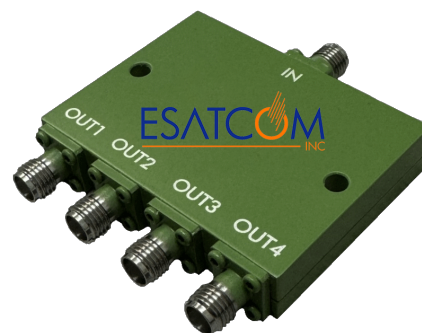


Photo is representative.

Specifications	Min.	Typ.	Max.	Units
Frequency	4	--	18	GHz
Impedance	--	50	--	Ohm
Return Loss (Port S)	12	13	--	dB
Return Loss (Port 1-4)	14	16	--	dB
Insertion Loss (above theoretical 6.02 dB)	--	0.7	1.0	dB
Isolation	18	21	--	dB
Amplitude Balance	--	0.4	0.6	dB
Phase Balance	--	6	10	Degrees
Input Power (CW) ¹	--	--	30	Watts (CW)

Mechanical

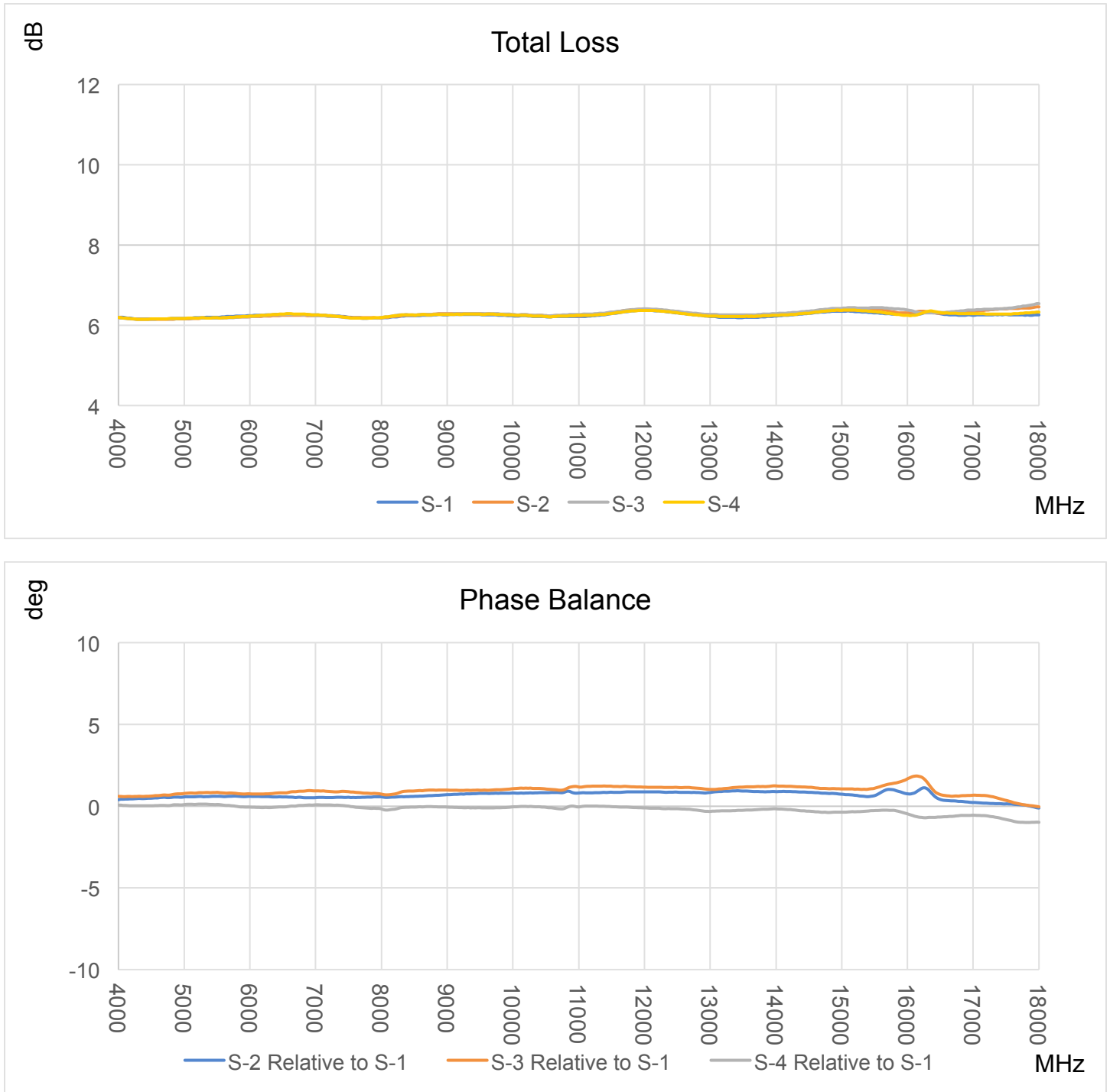
Connector Interface	SMA-Female
Operating Temperature ²	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight Estimate	2.2 oz (62 g)
Humidity	10-90% non-condensing
Environment	Indoors Use Only
CAGE Code	87MG8

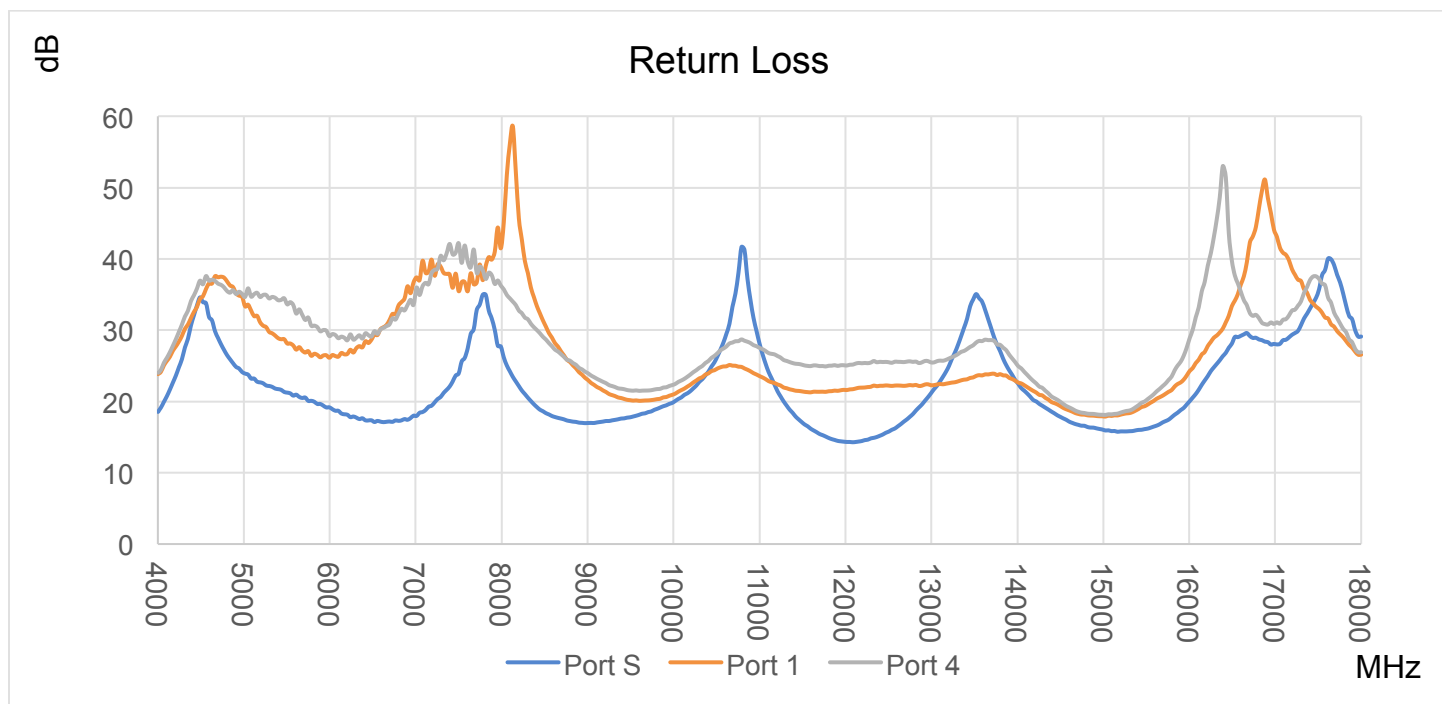
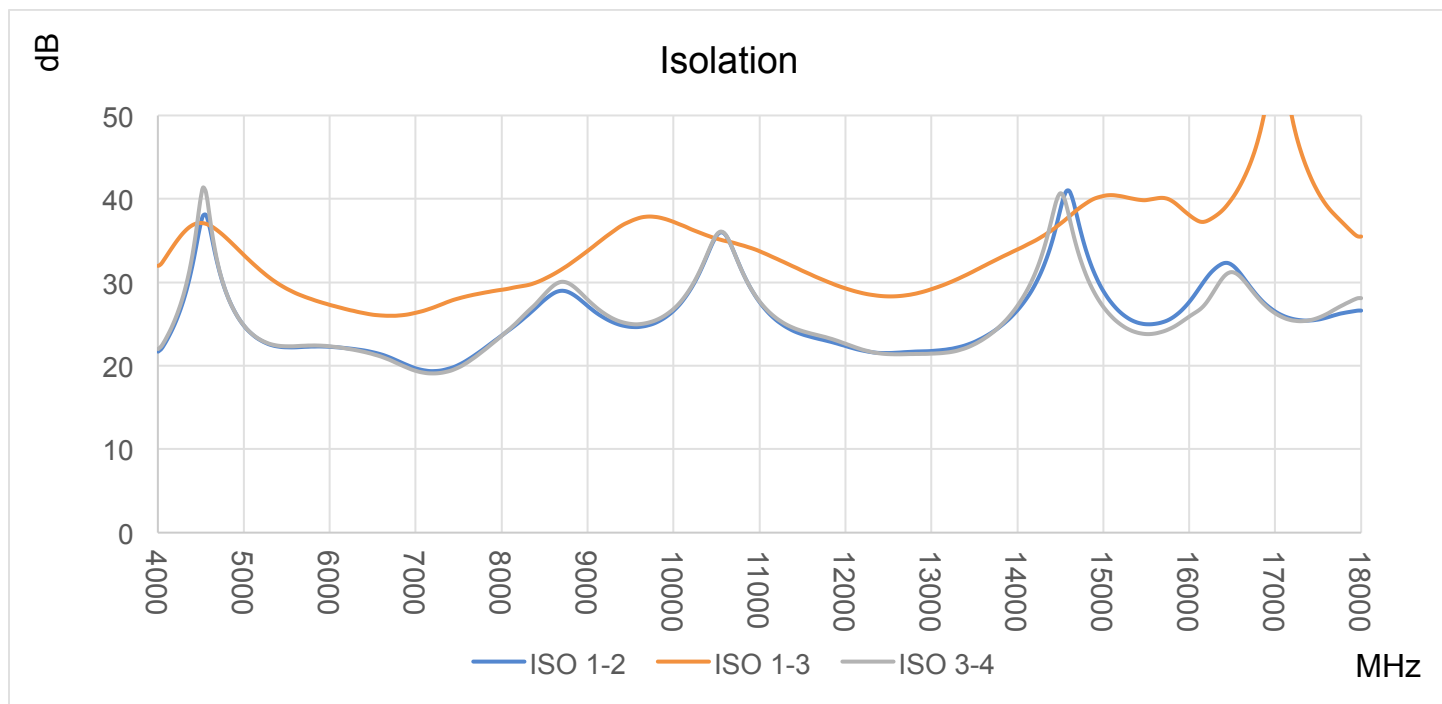
Materials

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

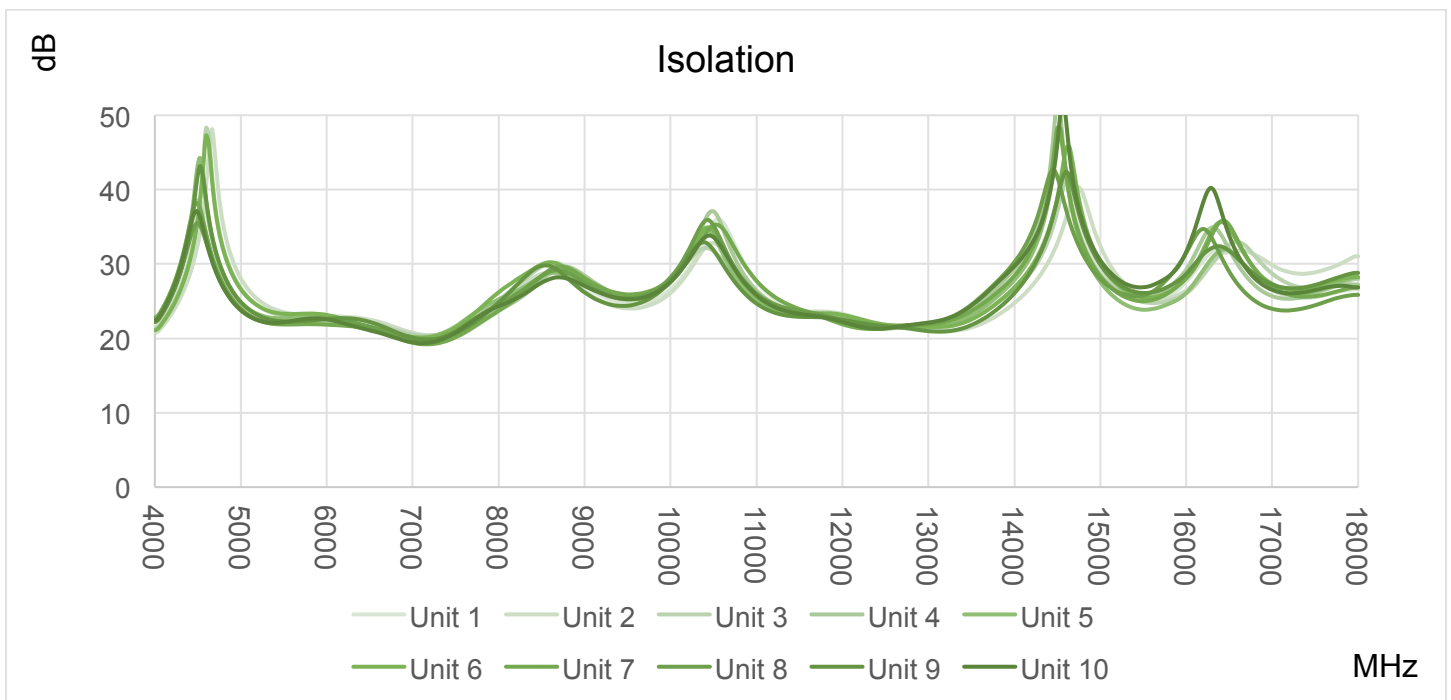
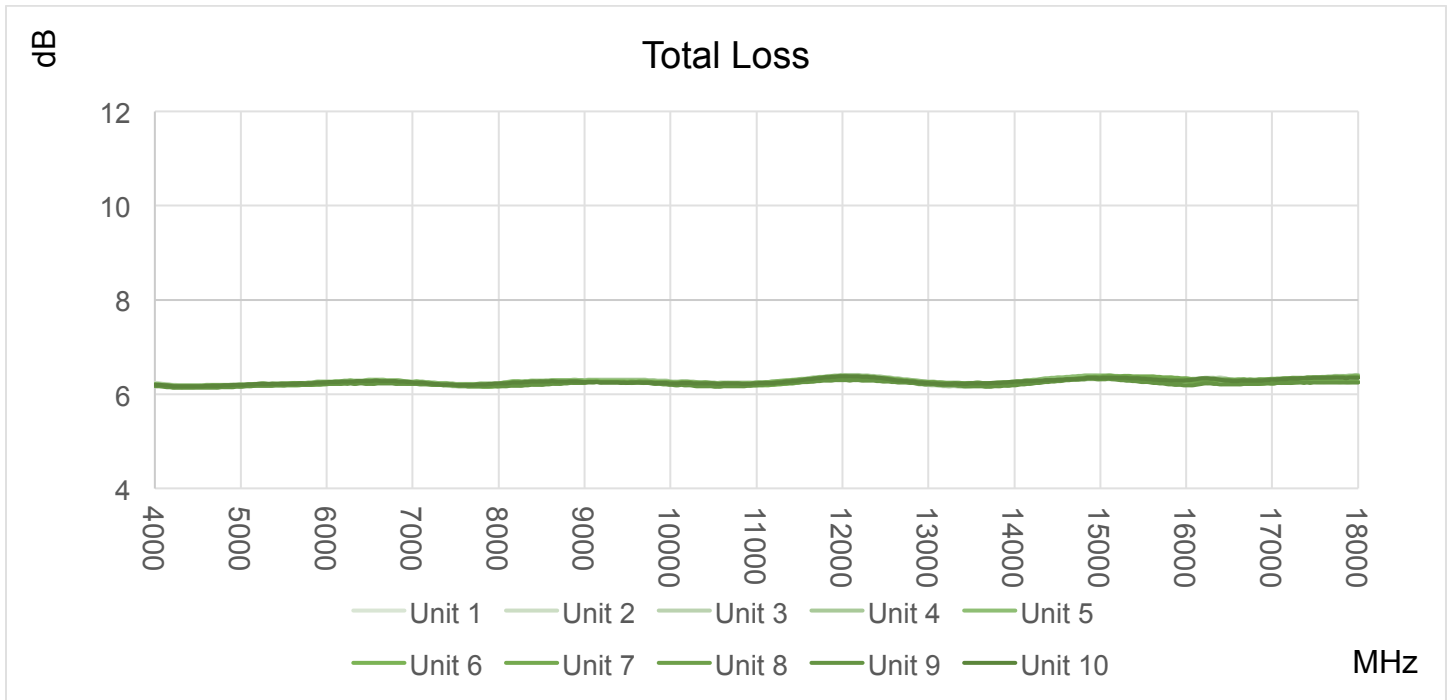
1. All output ports should be terminated in a 50-ohm load with 1.2:1 max VSWR.
2. Electrical specifications at +25 °C only.
3. To the best of our knowledge at the time of publication.

Typical Performance at +25 °C





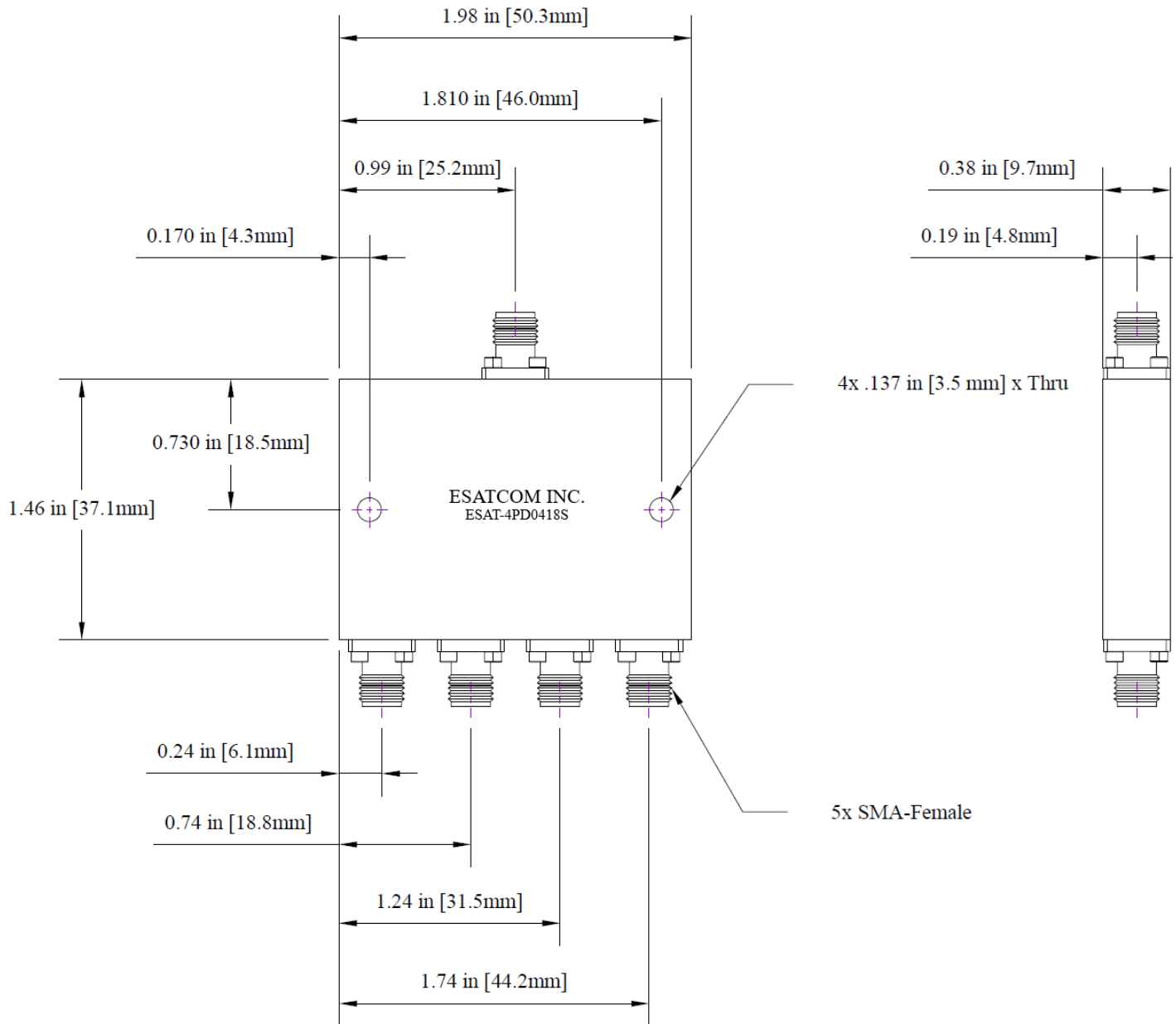
Repeatability in Productions



Typical Performance Data

Frequency (MHz)	Return Loss (dB)			Total Loss (dB)		Isolation (dB)
	Port S	Port 1	Port 4	S-1	S-4	
4000	17.8	23.8	17.9	6.0	6.1	21.3
4500	28.3	35.1	28.1	6.1	6.2	38.1
5000	24.7	37.5	25.0	6.1	6.2	24.8
5500	19.6	36.0	19.7	6.3	6.3	22.4
6000	17.5	33.8	17.3	6.2	6.2	22.5
6500	18.1	33.7	18.1	6.3	6.3	22.0
7000	20.9	32.9	20.9	6.3	6.2	20.1
7500	30.8	36.7	30.5	6.2	6.2	20.2
8000	28.2	37.8	28.0	6.2	6.3	23.0
8500	22.9	31.2	22.8	6.2	6.2	29.5
9000	20.0	24.9	20.0	6.5	6.6	28.7
9500	19.2	22.2	19.2	6.2	6.1	23.7
10000	19.5	22.3	19.6	6.2	6.3	25.9
10500	22.5	26.6	22.5	6.4	6.3	43.8
11000	37.1	32.0	37.7	6.1	6.3	25.8
11500	18.9	25.5	18.9	6.4	6.4	23.5
12000	14.7	25.0	14.6	6.4	6.4	24.0
12500	15.3	29.7	15.3	6.4	6.4	23.2
13000	20.3	30.0	20.3	6.4	6.4	22.1
13500	34.2	27.4	34.6	6.2	6.3	22.5
14000	30.1	28.7	29.9	6.3	6.3	26.1
14500	23.6	24.3	23.5	6.3	6.4	34.3
15000	18.1	20.3	18.1	6.4	6.4	27.7
15500	15.0	19.5	15.1	6.5	6.5	23.9
16000	15.5	21.1	15.5	6.4	6.4	25.8
16500	22.1	24.7	22.2	6.4	6.4	30.1
17000	31.6	30.2	31.9	6.3	6.4	24.6
17500	22.8	34.0	22.9	6.3	6.3	23.6
18000	23.4	29.7	23.3	6.4	6.4	27.1
18500	20.8	25.9	20.7	6.4	6.4	31.3
19000	17.1	24.8	17.2	6.3	6.3	32.1
19500	17.8	30.3	17.9	6.5	6.6	24.3
20000	22.8	27.1	22.8	6.3	6.5	18.2

Outline Dimensions



Outline drawing: OL-4184

Dimensions are in inches, [mm] shown for convenience.

Tolerances on 2-pl decimals: ± 0.03 . 3-pl decimals: ± 0.015 .

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