

Power Divider, 4-way, 2-18GHz, SMA Female

ESAT-4PD0218S

Description

ESAT-4PD0218S is a wideband 4-way in-line power splitter covering the continuous bandwidth of 2 to 18 GHz in an aluminum enclosure measuring 4.00 x 2.50 x 0.38 inches. This covers several of the octave letter bands used by the military including S, C, X and Ku bands. The device is RoHS compliant, however lead solder is available on special order for high reliability military applications. Excellent VSWR and insertion loss, and 0.3dB typical amplitude balance across the band. Connectors are stainless steel for durability. Our own unique design maximizes bandwidth in a small size. Assembled and tested in USA. In continual production since 2015.



Photo is representative.

Specifications	Min.	Typ.	Max.	Units
Frequency	2	--	18	GHz
Impedance	--	50	--	Ohm
Return Loss (Port S)	11	13	--	dB
Return Loss (Port 1-4)	14	17	--	dB
Insertion Loss (above theoretical 6.02 dB)	--	0.8	1.8	dB
Isolation	16	18	--	dB
Amplitude Balance	--	0.3	1.0	dB
Phase Balance	--	3	12	Degrees
Input Power (CW) ¹	--	--	30	Watts

Mechanical

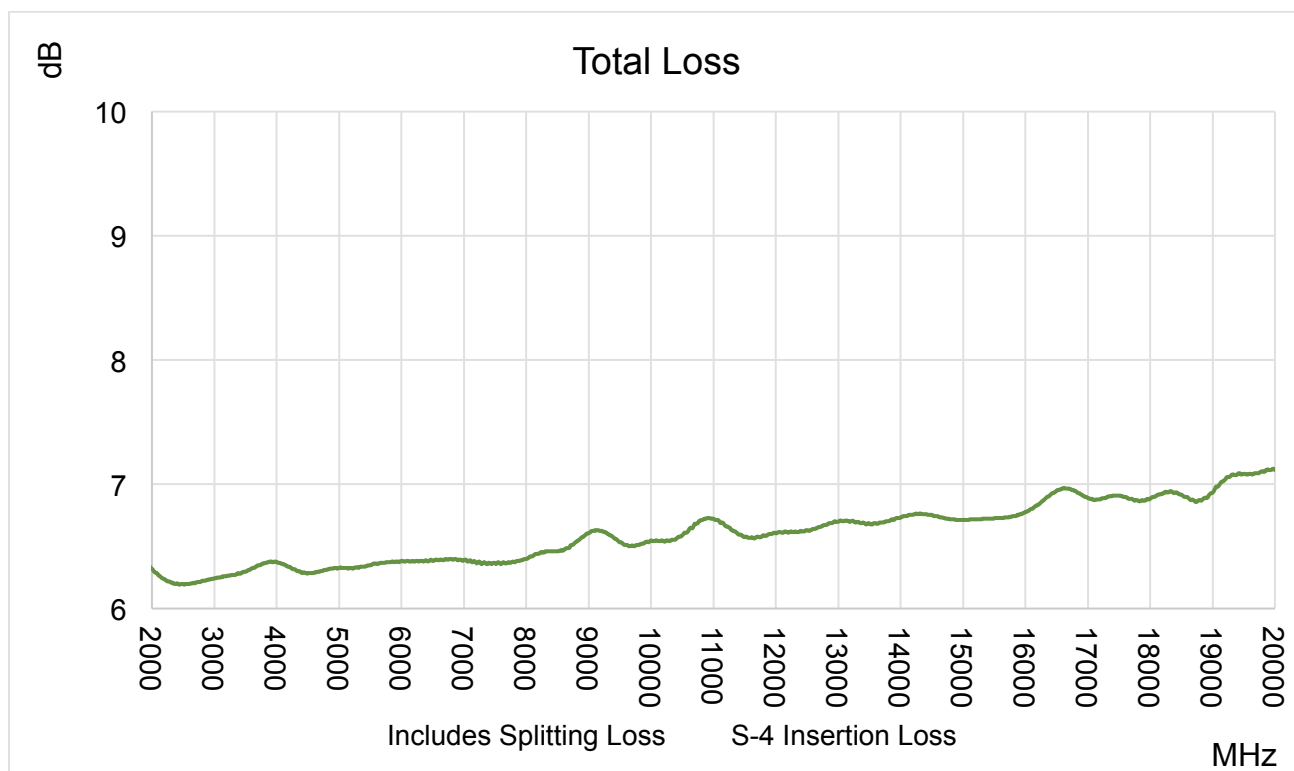
Connector Interface	SMA-Female
Operating Temperature ²	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight Estimate	11 oz (312 g)
Humidity	10-90% non-condensing
Environment	Indoors Use Only

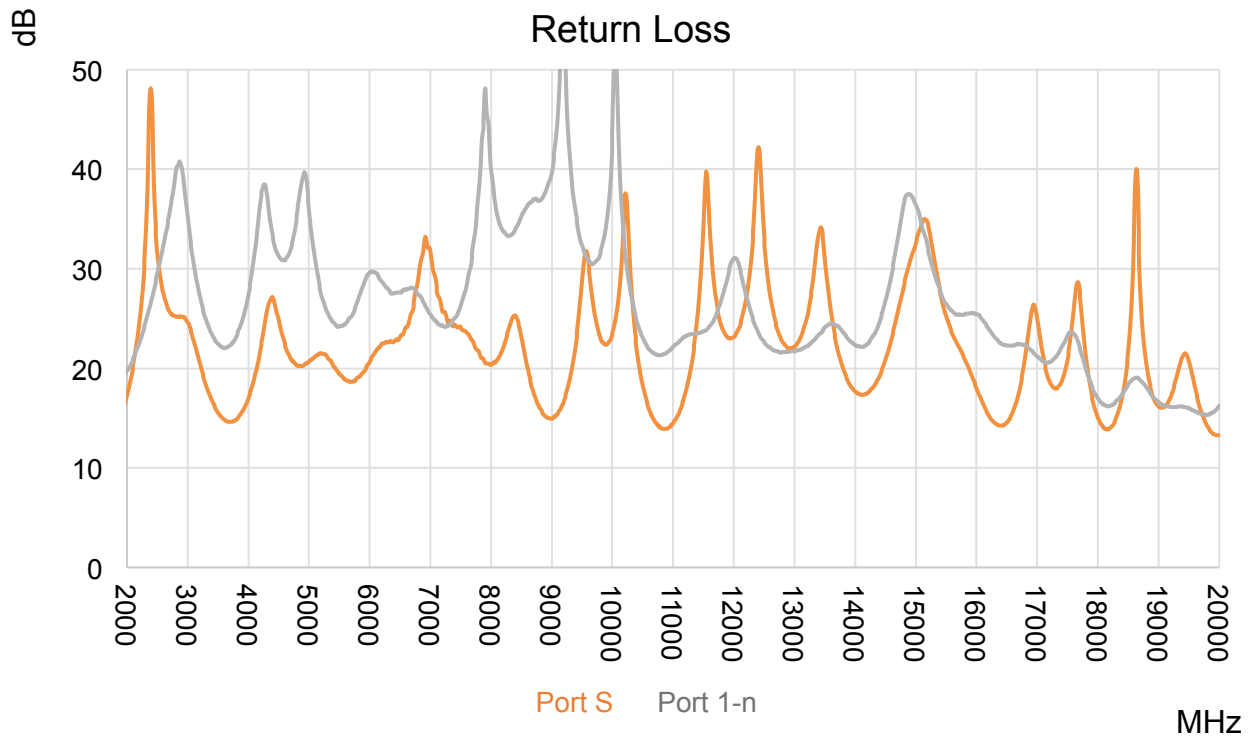
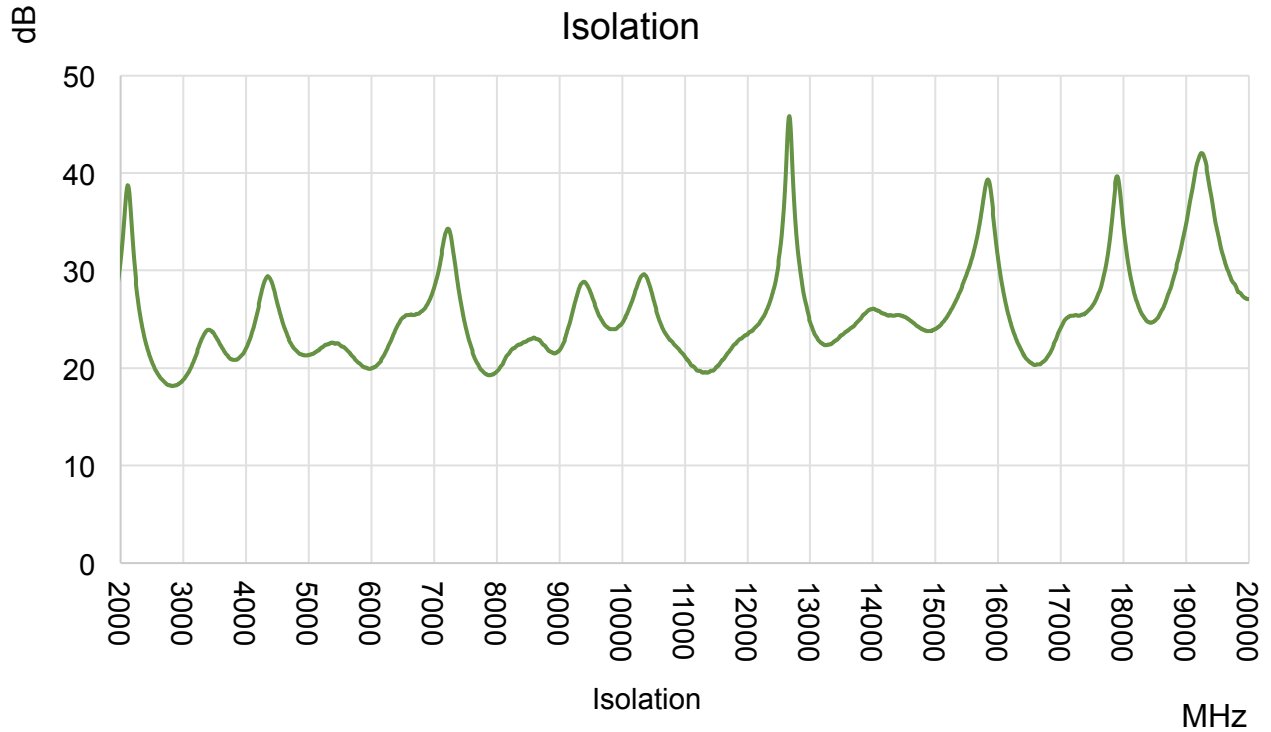
Materials

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





Typical Performance Data

Frequency (MHz)	Return Loss (dB)			Total Loss (dB)		Isolation (dB)
	Port S	Port 1	Port 4	S-1	S-4	I-2
2000	18.0	20.1	18.1	6.3	6.3	32.8
2500	30.2	30.5	30.1	6.2	6.2	20.1
3000	24.4	32.8	24.5	6.2	6.2	19.1
3500	15.2	22.2	15.2	6.3	6.3	23.0
4000	17.5	28.5	17.5	6.3	6.2	22.4
4500	24.1	30.3	24.1	6.3	6.3	26.0
5000	20.9	33.4	21.0	6.3	6.4	21.4
5500	19.3	24.2	19.2	6.3	6.3	22.2
6000	21.2	29.6	21.2	6.4	6.4	20.1
6500	23.4	27.0	23.4	6.3	6.4	25.3
7000	28.9	25.6	29.0	6.5	6.5	29.1
7500	23.5	26.7	23.5	6.4	6.4	23.4
8000	20.7	37.2	20.8	6.4	6.4	19.8
8500	22.2	35.7	22.3	6.4	6.5	22.9
9000	14.9	40.6	14.8	6.6	6.7	22.2
9500	31.0	32.0	30.9	6.6	6.5	27.1
10000	24.1	52.7	24.2	6.5	6.6	25.0
10500	17.5	22.6	17.5	6.8	6.8	26.3
11000	14.7	22.5	14.8	6.5	6.5	20.8
11500	39.6	23.7	39.8	6.6	6.6	20.2
12000	23.3	31.3	23.4	6.7	6.7	23.7
12500	31.0	22.4	31.1	6.6	6.6	32.2
13000	22.2	21.7	22.3	6.9	6.9	24.3
13500	29.3	24.4	29.6	6.6	6.6	23.4
14000	17.5	22.2	17.5	6.8	6.9	26.1
14500	21.4	27.6	21.4	6.7	6.8	25.2
15000	33.4	36.0	33.6	6.7	6.8	24.1
15500	24.7	26.1	24.8	6.7	6.8	30.2
16000	17.5	25.5	17.5	6.8	6.9	29.8
16500	14.8	22.2	14.8	7.1	7.2	20.6
17000	24.0	21.1	24.2	6.8	6.9	24.5
17500	22.0	23.6	22.0	6.8	6.9	26.6
18000	14.6	16.6	14.6	7.1	7.2	32.8
18500	23.6	18.7	23.5	6.8	6.9	25.0
19000	16.0	16.4	16.1	7.0	7.1	35.9
19500	20.0	15.9	20.1	7.1	7.2	33.0
20000	13.3	16.5	13.3	7.2	7.3	27.1

Tolerances on 2-pl decimals: $\pm .03$. 3-pl decimals: $\pm .015$.

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