

Power Divider, 8-way, 2-18 GHz, SMA Female

ESAT-8PD0218S

Description

ESAT-8PD0218S is a wideband 8-way in-line power splitter covering a continuous bandwidth of 2 to 18 GHz in an aluminum enclosure measuring 5.75 x 4.46 x 0.38 inches. One product covers S, C, X and Ku bands. Connectors are stainless steel for ruggedness and durability. The device is RoHS compliant but lead solder is available for special order versions for military applications. The device covers several of the military letter bands. The isolation is typically 19dB between output pairs, and approaches 30dB between non-adjacent outputs. Our unique design approach provides high performance over a wide bandwidth in a compact enclosure. Assembled and tested in the USA.



Photo is representative.

Specifications	Min.	Typ.	Max.	Units
Frequency	2	--	18	GHz
Impedance	--	50	--	Ohm
Return Loss (Port S)	10	14	--	dB
Return Loss (Port 1-8)	14	20	--	dB
Insertion Loss (above 9.03dB)	--	1.1	2.4	dB
Isolation	16	19	--	dB
Amplitude Balance	--	0.4	1.0	dB
Phase Balance	--	2	10	Degrees
Input Power (CW) ¹	--	--	25	Watts

Mechanical

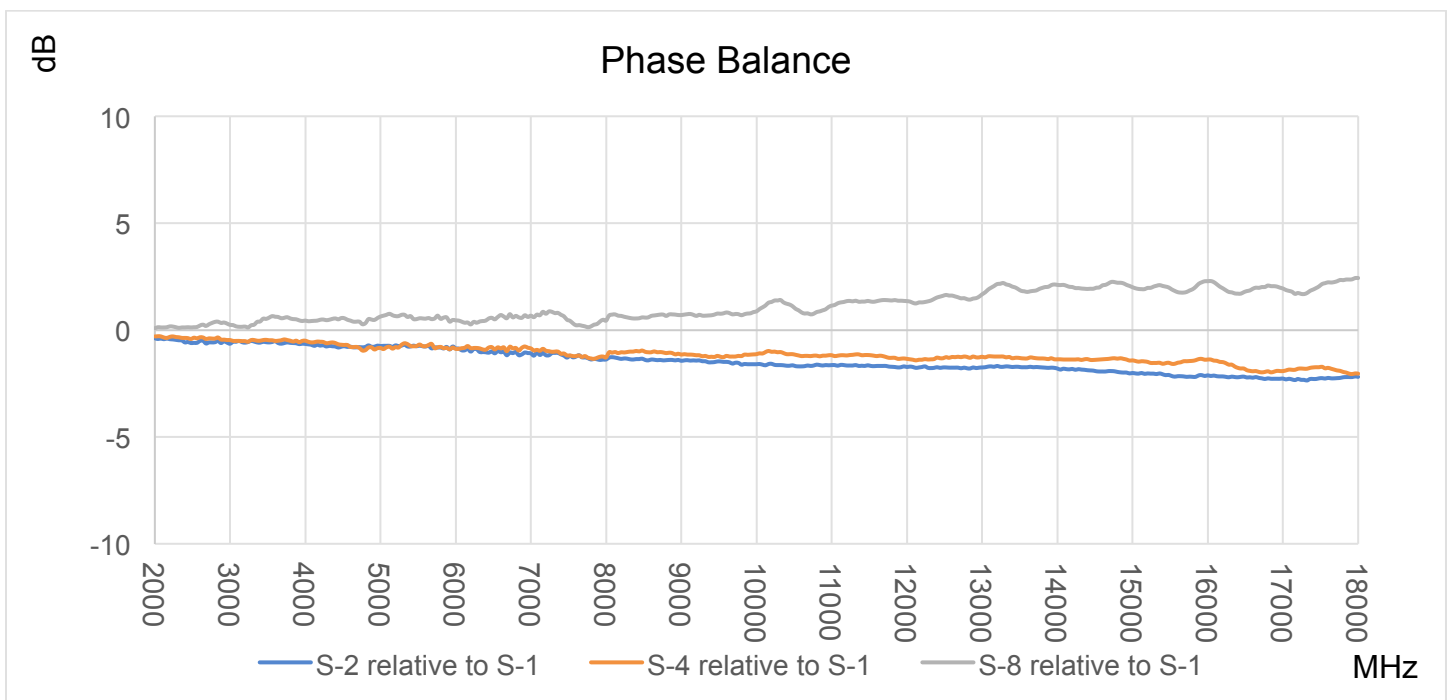
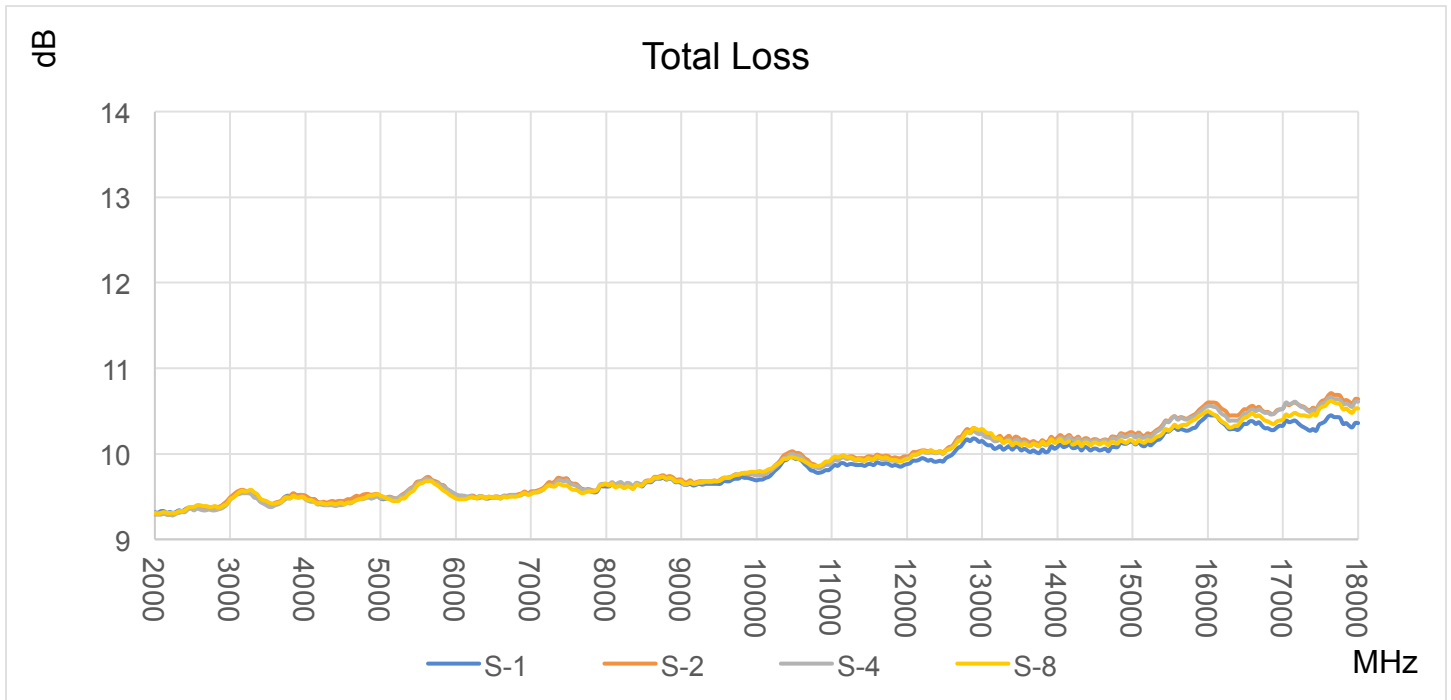
Connector Interface	SMA-Female
Operating Temperature ²	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight Estimate	15 oz (425 g)
Humidity	10-90% non-condensing
Environment	Indoors Use Only
CAGE Code	87MG8

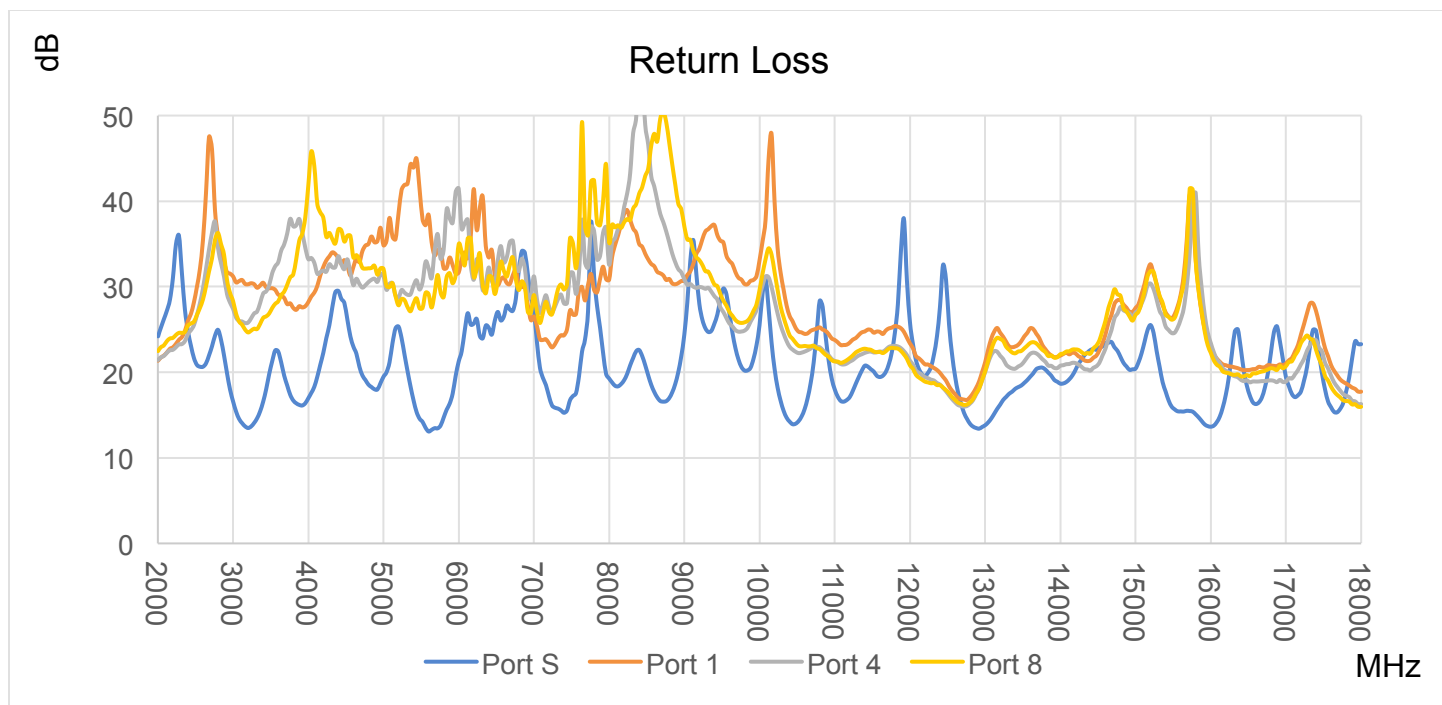
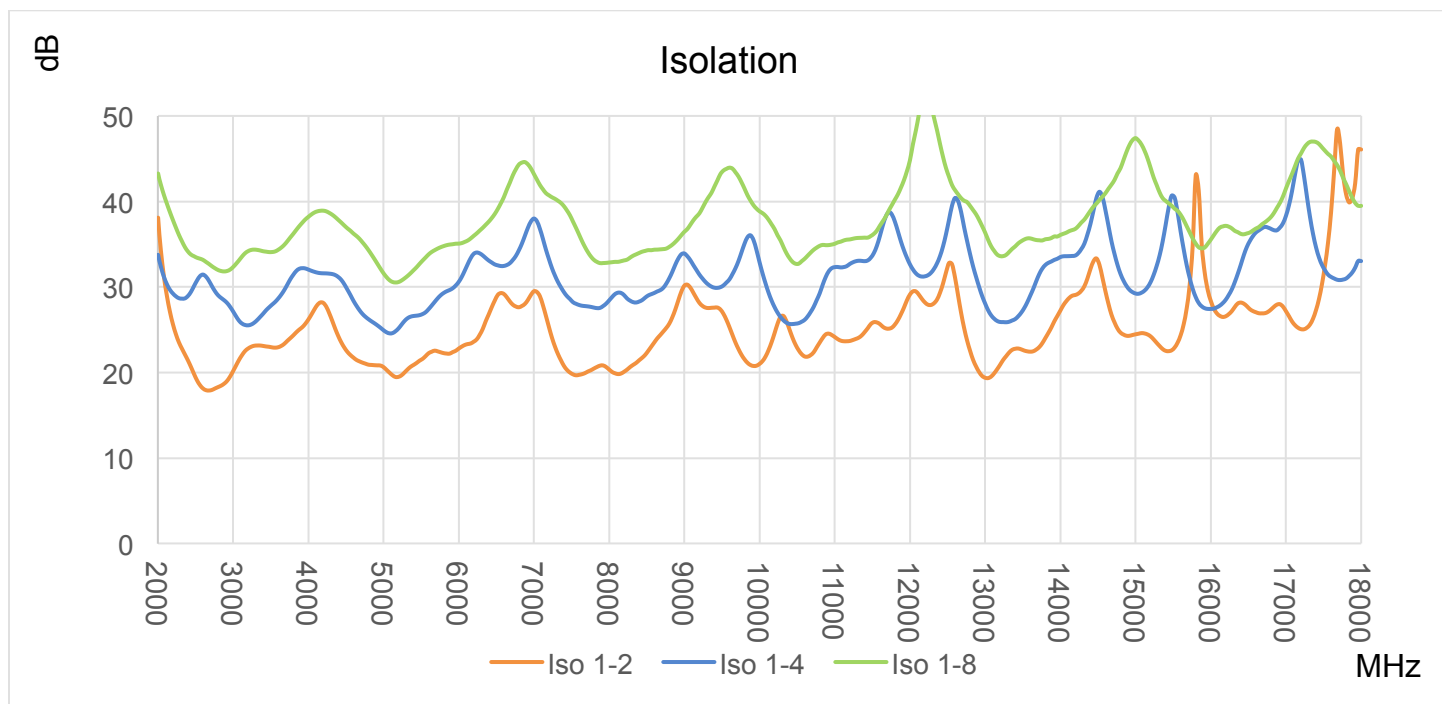
Materials

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

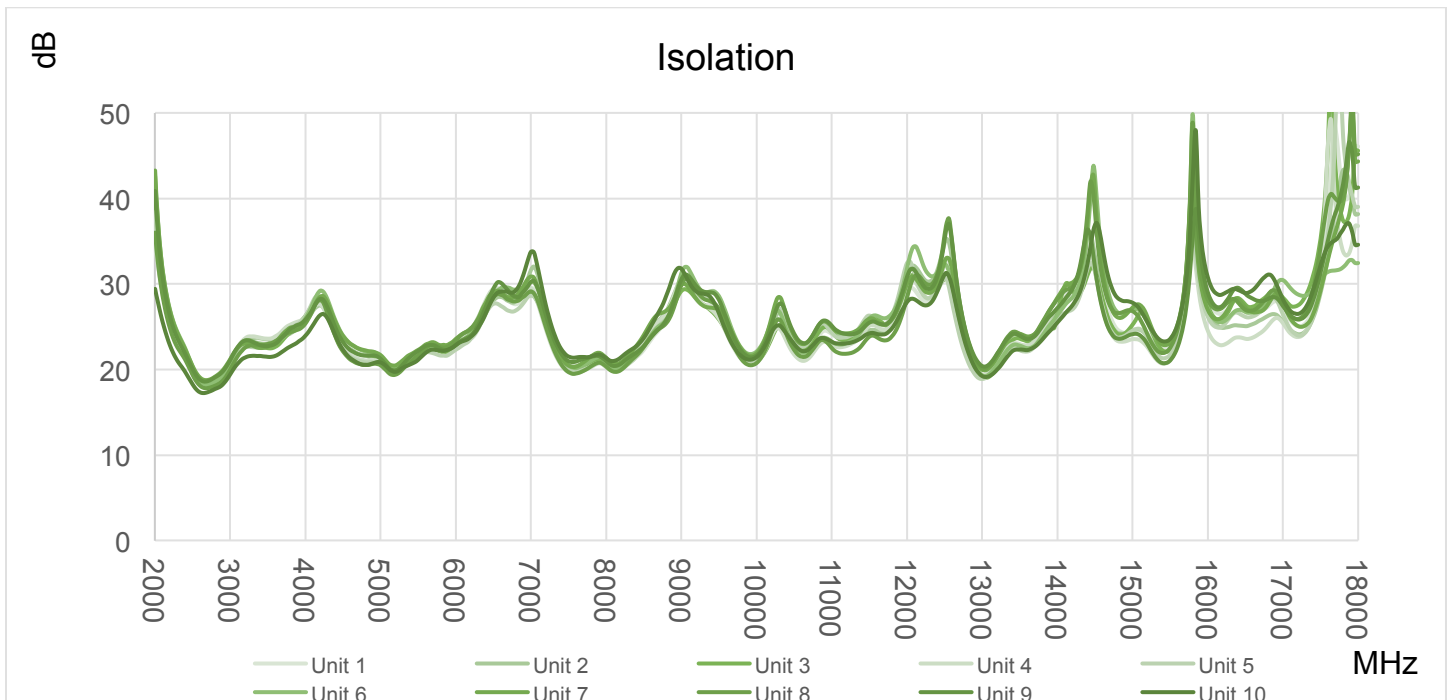
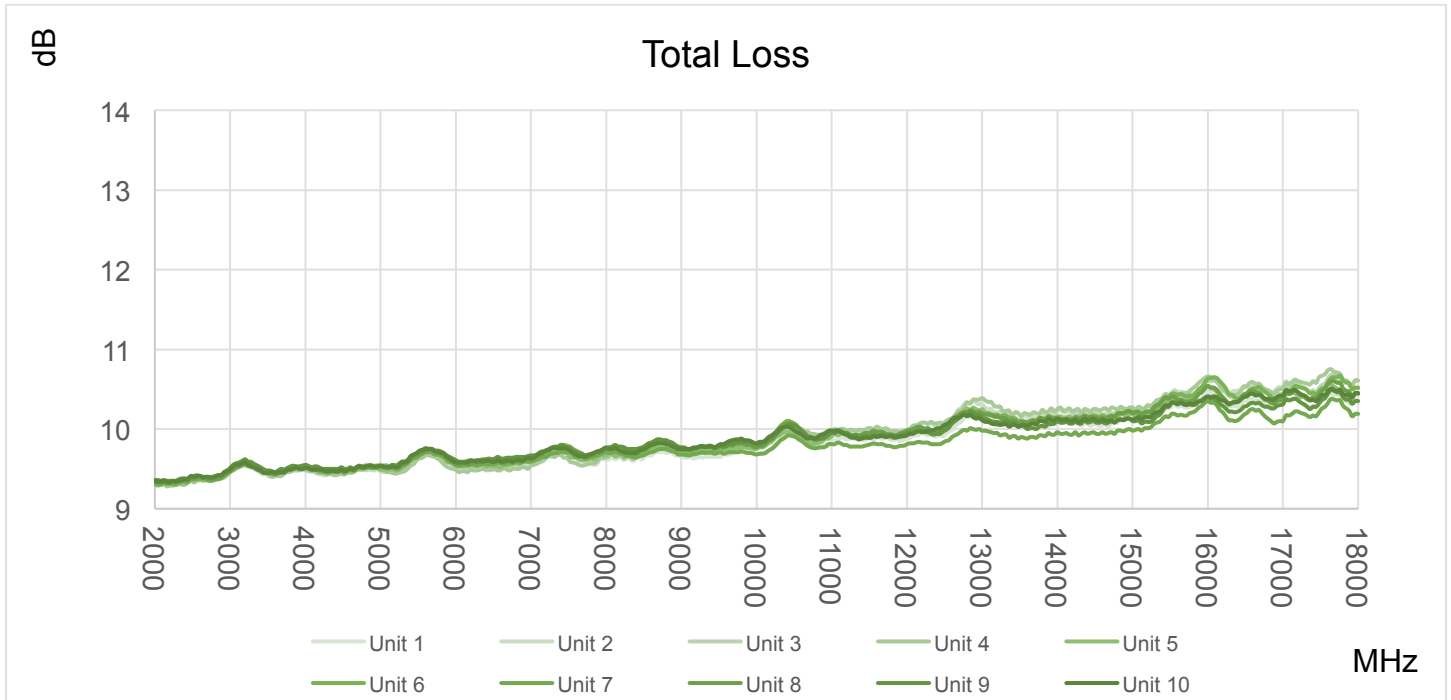
1. All output ports should be terminated in a 50-ohm load with 1.2:1 max VSWR.
2. Electrical specifications at +25 °C only.
3. To the best of our knowledge at the time of publication.

Typical Performance at +25 °C





Repeatability in Production



Typical Performance Data

Frequency (MHz)	Return Loss (dB)			Total Loss (dB)		Isolation (dB) 1-2
	Port S	Port 1	Port 6	S-1	S-6	
2000	21.8	22.1	21.8	9.3	9.3	40.3
2500	20.4	31.1	20.5	9.3	9.4	20.5
3000	17.7	32.3	17.6	9.4	9.4	20.7
3500	18.5	22.8	18.6	9.4	9.4	23.2
4000	18.5	26.4	18.5	9.5	9.5	26.1
4500	21.2	26.8	21.3	9.5	9.5	24.4
5000	27.0	24.2	26.9	9.5	9.5	22.9
5500	14.6	22.5	14.6	9.7	9.7	22.6
6000	26.7	24.3	26.7	9.6	9.5	23.3
6500	34.8	22.4	34.5	9.6	9.6	29.4
7000	19.1	19.6	19.2	9.7	9.6	31.2
7500	20.2	23.2	20.2	9.7	9.7	22.2
8000	23.0	25.3	22.8	9.7	9.7	22.4
8500	28.3	22.4	28.4	9.7	9.7	23.7
9000	23.5	24.3	23.5	9.8	9.8	32.1
9500	22.0	30.0	22.1	9.8	9.8	26.8
10000	32.4	25.4	32.6	9.9	9.8	22.3
10500	15.9	32.6	15.9	10.1	10.0	24.1
11000	21.2	26.3	21.3	10.0	10.0	25.0
11500	26.7	24.0	26.9	10.0	10.0	25.9
12000	30.4	28.0	30.5	10.1	10.0	31.7
12500	19.8	23.1	19.8	10.1	10.1	31.7
13000	15.0	17.5	15.0	10.3	10.3	21.5
13500	24.4	20.7	24.3	10.2	10.1	25.6
14000	24.8	21.6	24.9	10.2	10.2	29.5
14500	26.5	18.3	26.4	10.3	10.2	44.0
15000	41.4	19.7	41.7	10.4	10.2	28.2
15500	20.1	23.4	20.0	10.4	10.4	25.6
16000	13.7	19.4	16.7	10.8	10.7	27.3
16500	24.9	29.2	24.8	10.5	10.5	26.9
17000	26.7	32.3	26.6	10.6	10.5	26.9
17500	22.6	21.8	22.6	10.7	10.6	29.6
18000	22.5	18.7	22.6	10.7	10.7	38.5
18500	13.3	18.9	16.2	10.9	10.9	26.9
19000	20.0	23.2	20.0	10.8	10.7	28.7
19500	27.3	24.3	27.3	10.8	10.8	27.8
20000	15.7	18.0	15.7	11.1	11.1	34.4

4.46 in [113.3mm]

4.330 in [110.0mm]

2.23 in [56.6mm]

0.130 in [3.3mm]

9x SMA-Female

0.875 in [22.2mm]

5.75 in [146.1mm]

4.875 in [123.8mm]

ESATCOM INC.
ESAT-8PD0218S

4x .125 in [3.2 mm] x Thru

0.38 in [9.7mm]

0.19 in [4.8mm]

2x 0.48 in [12.2mm]

7x 0.50 in [12.7mm]

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

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