

Power Divider, 2-way, 1-18 GHz, SMA Female

ESAT-2PD0118S

Description

ESAT-2PD0118S is a wideband 2-way in-line power splitter covering 1 to 18 GHz with excellent return loss, low insertion loss, and high isolation performance. Insertion loss is 0.9dB typical, with typical isolation of 18.7dB between outputs. The device covers many of the military letter bands and is RoHS compliant, but Sn/Pb solder is available on special order. The compact size enclosure measures 3.90 x 0.98 x 0.38 inches with four through-mounting holes. One product covers L, C, X and Ku bands in a compact enclosure. Designed, assembled, and tested in the USA.



Photo is representative.

Specifications	Min.	Typ.	Max.	Units
Frequency	1	--	18	GHz
Impedance	--	50	--	Ohm
Return Loss (Port S)	15.0	16.9	--	dB
Return Loss (Port 1-2)	17.0	19.2	--	dB
Insertion Loss (Above theoretical 3.01 dB)	--	0.9	1.4	dB
Isolation	16.0	18.7	--	dB
Amplitude Unbalance	--	0.2	0.9	dB
Phase Unbalance	--	0.7	3.0	Degrees
Input Power (CW) ¹	--	--	30	Watts

Mechanical

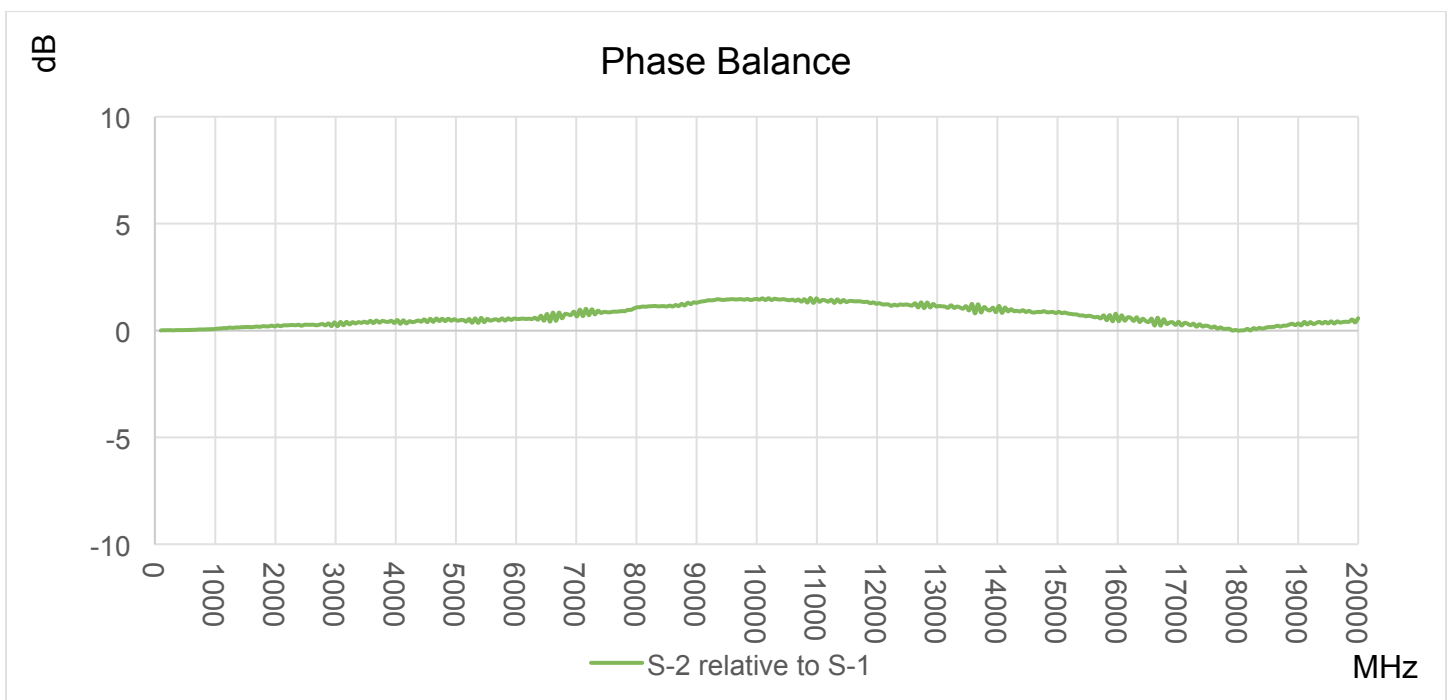
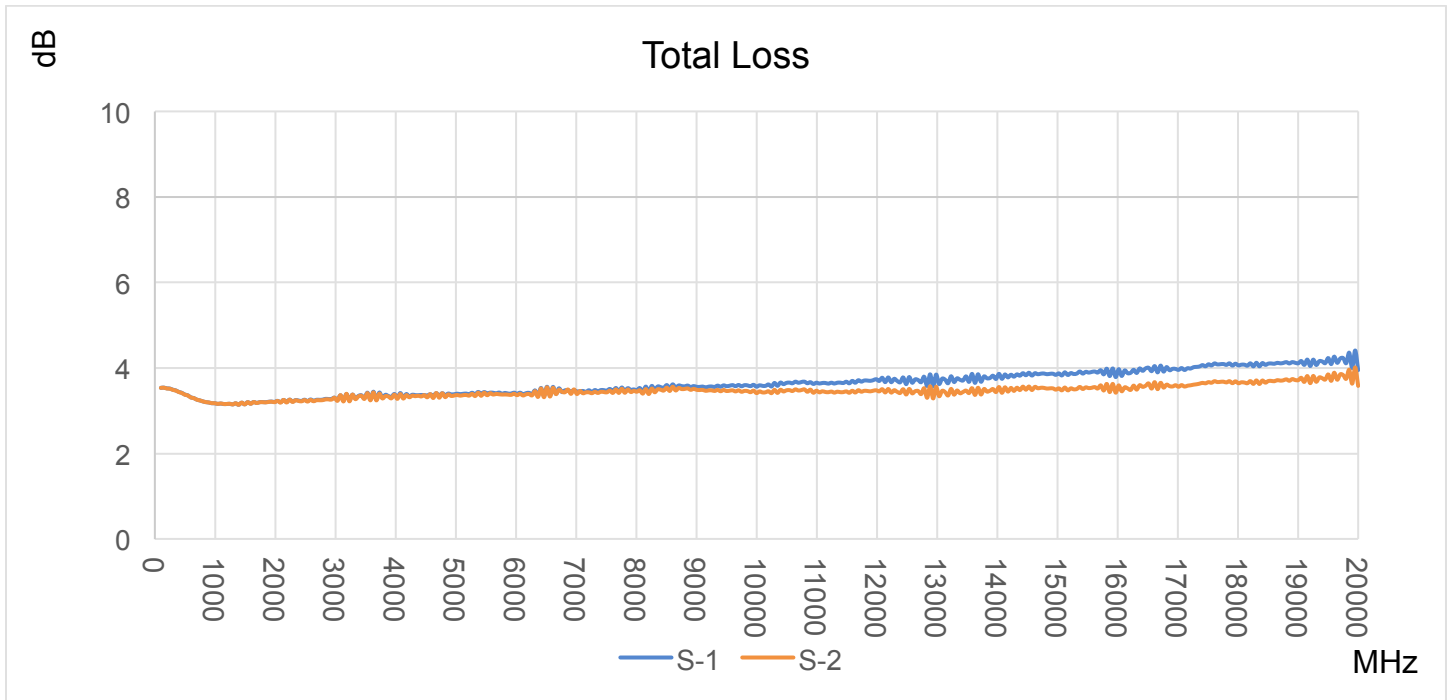
Connector Interface	SMA-Female
Operating Temperature ²	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight Estimate	2.6 oz (74 g)
Humidity	10-90% non-condensing
Environment	Indoors Use Only
CAGE Code	87MG8

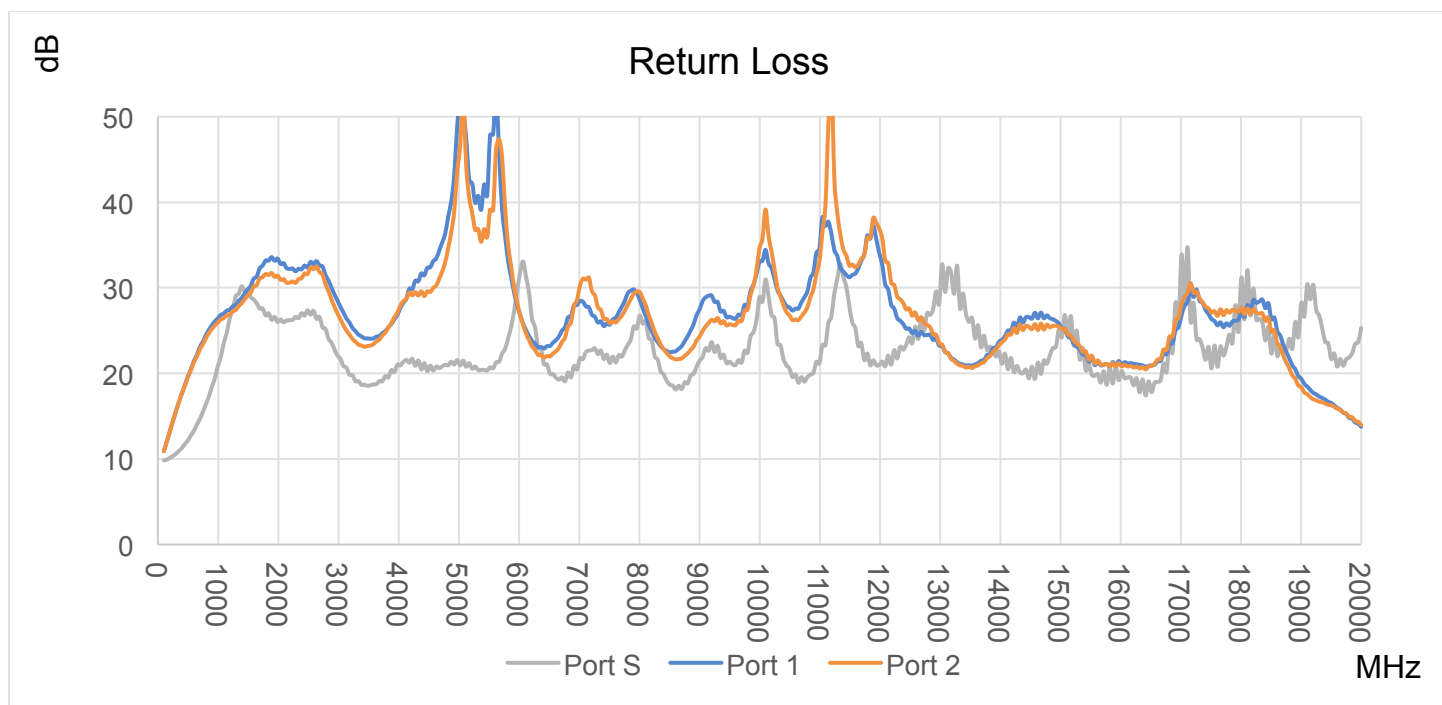
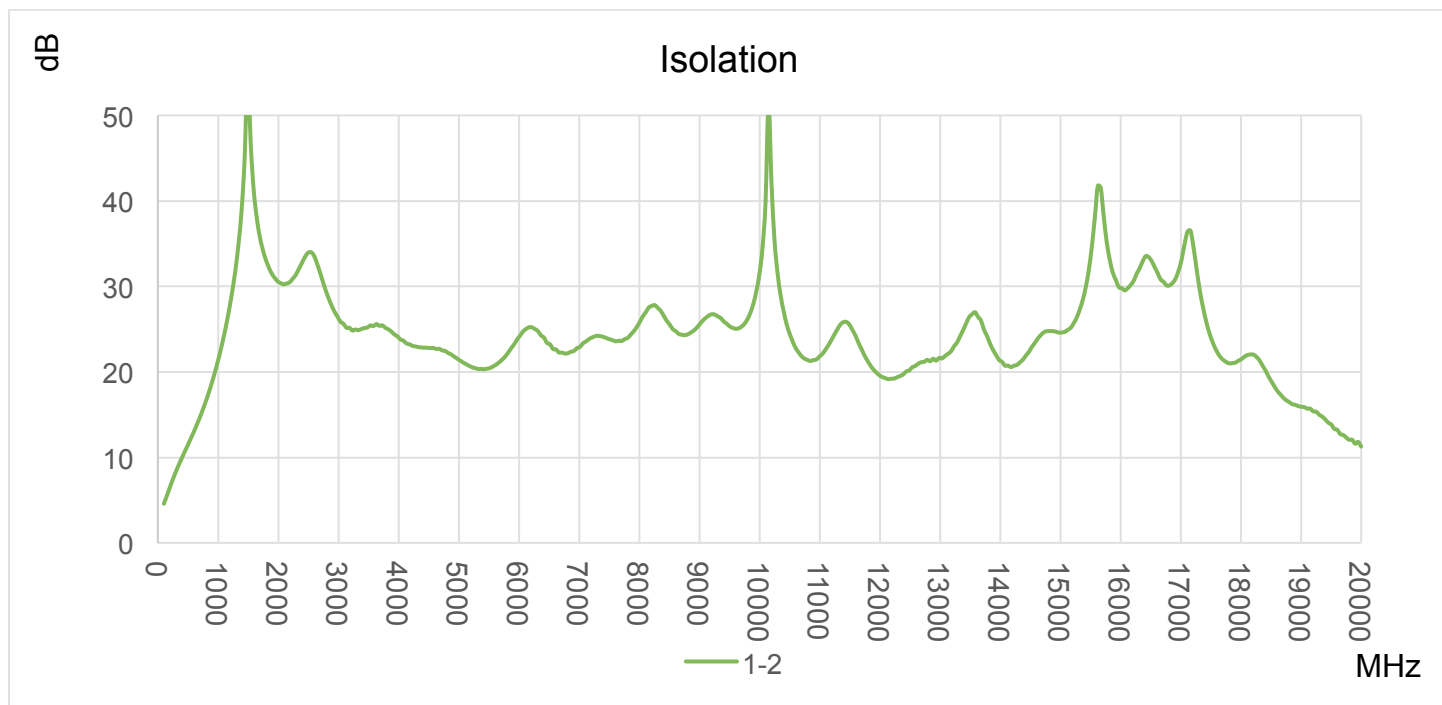
Materials

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

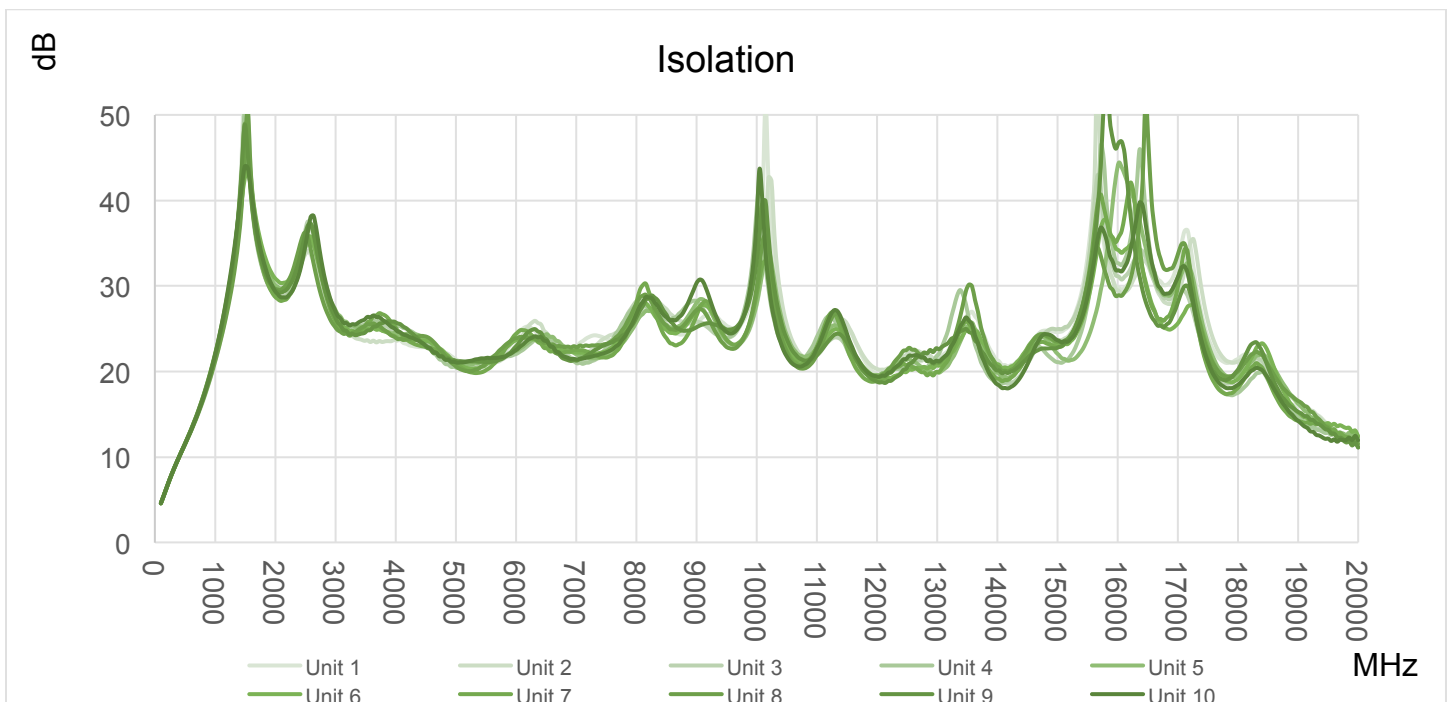
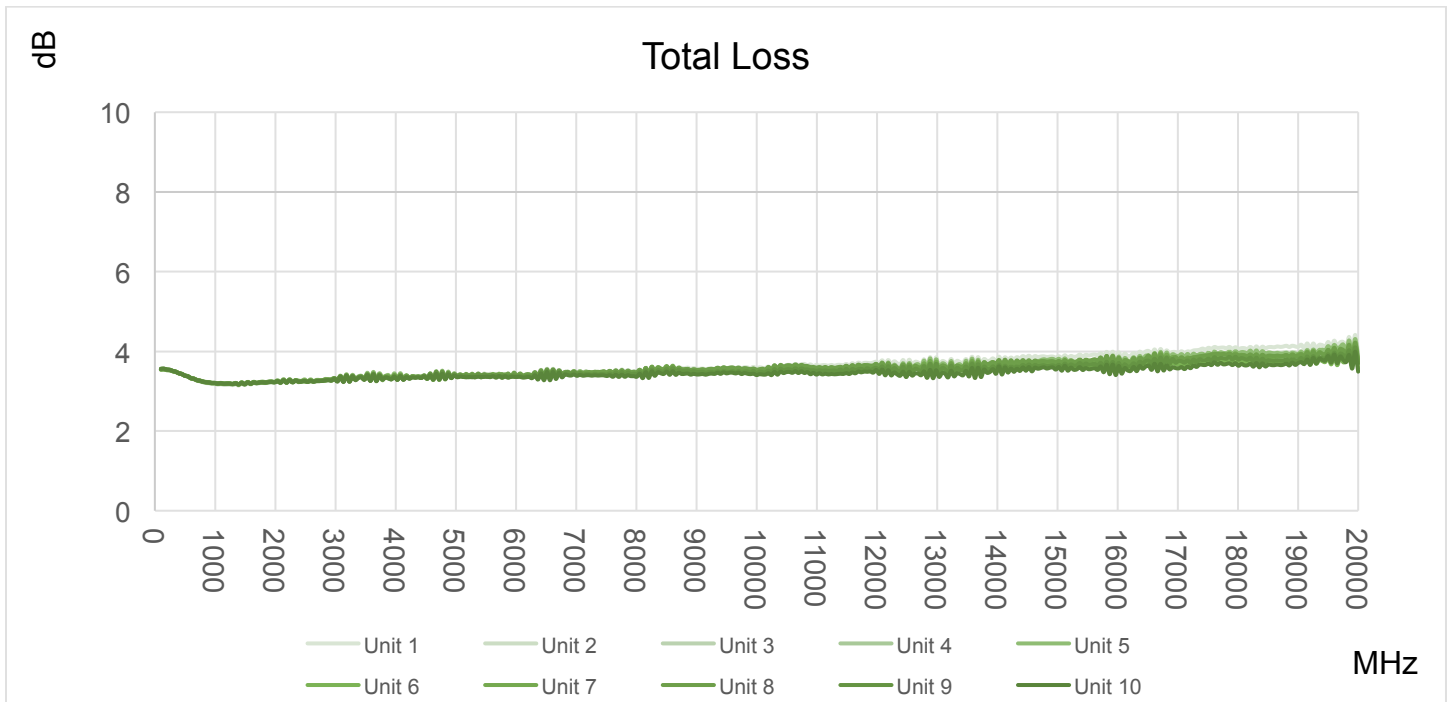
1. All output ports should be terminated in a 50-ohm load with 1.2:1 max VSWR.
2. Electrical specifications at +25 °C only.
3. To the best of our knowledge at the time of publication.

Typical Performance at +25 °C





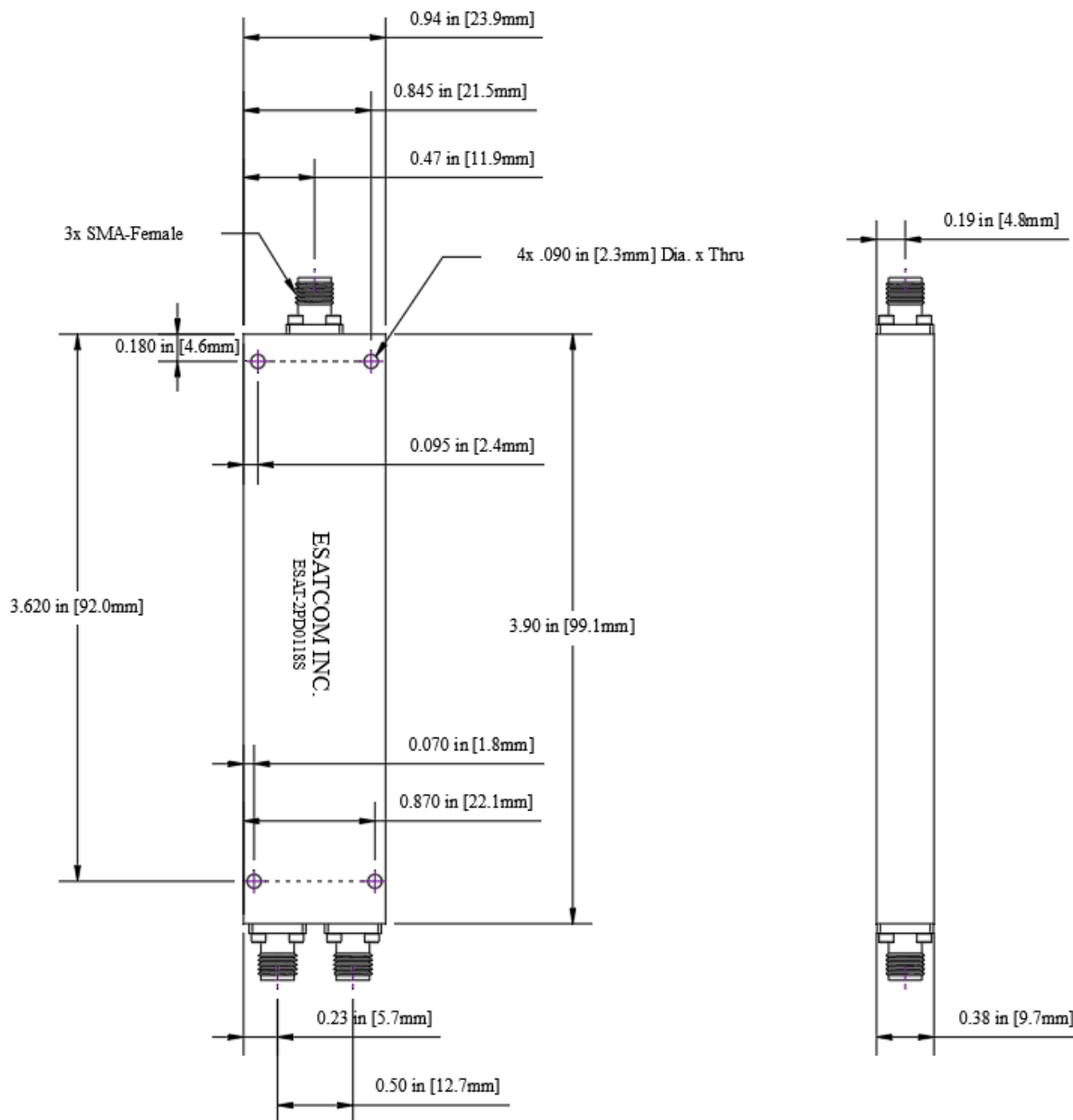
Repeatability in Production



Typical Performance Data

Frequency (MHz)	Return Loss (dB)			Total Loss (dB)		Isolation (dB)
	Port S	Port 1	Port 2	S-1	S-2	
100	9.80	10.91	10.91	3.54	3.54	4.61
299	10.60	15.53	15.53	3.50	3.49	8.35
498	12.15	19.63	19.56	3.38	3.38	11.46
697	14.66	23.05	22.81	3.26	3.26	14.68
896	18.41	25.61	25.18	3.20	3.20	18.72
1095	23.55	26.99	26.46	3.17	3.17	24.15
1294	29.01	27.99	27.40	3.15	3.15	32.19
1493	29.73	29.81	29.10	3.15	3.15	55.74
1692	27.58	32.27	31.09	3.19	3.18	35.90
1891	26.25	33.59	31.74	3.21	3.21	31.53
2090	25.98	32.89	31.01	3.20	3.19	30.26
3085	20.87	27.11	25.62	3.36	3.37	25.64
4080	21.35	28.26	28.43	3.42	3.40	23.68
5075	21.51	50.70	52.33	3.39	3.36	21.11
6070	33.09	25.85	25.70	3.43	3.40	24.75
7065	21.67	28.37	31.07	3.46	3.47	23.36
8060	25.82	27.58	28.72	3.54	3.48	26.51
9055	21.93	28.46	24.97	3.56	3.49	26.00
10050	28.38	33.17	35.75	3.60	3.46	34.55
11045	23.34	38.24	36.50	3.64	3.43	22.12
12040	21.39	32.68	35.79	3.70	3.46	19.42
13035	32.76	23.23	23.38	3.63	3.34	21.59
14030	21.11	23.93	23.64	3.87	3.56	21.21
15025	24.22	25.22	25.16	3.88	3.53	24.64
16020	20.28	21.02	20.82	3.98	3.60	29.81
17015	33.88	26.83	28.15	3.96	3.56	33.13
18010	31.22	27.24	27.70	4.06	3.65	21.51
19005	28.24	19.37	18.38	4.11	3.72	15.95
20000	25.31	13.77	13.99	3.95	3.58	11.29

Outline Dimensions



Outline drawing: OL-2181

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

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

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