

Power Divider, 2-way, 0.5-18GHz, SMA Female

ESAT-2PD00518S

Description

ESAT-2PD00518S is a wideband 2-way in-line power splitter covering the continuous bandwidth of 500 MHz to 18 GHz in a compact enclosure measuring 4.75 x 1.00 x 0.50 inches. The device is RoHS compliant but may be ordered specially with lead solder for military applications. The wide bandwidth covers many of the military radio letter octave bands in one unit. High isolation between outputs of 20dB typical. Connectors are stainless steel for high durability. One product covers the upper band of UHF, L band, S band, C band, X band and Ku band. Our unique design, assembled and tested in USA.



Photo is representative.

Specifications	Min.	Typ.	Max.	Units
Frequency	500	--	18000	MHz
Impedance	--	50	--	Ohm
Return Loss (Port S)	11	15	--	dB
Return Loss (Ports 1-2)	11	18	--	dB
Insertion Loss (above 3.0dB)	500-8000MHz	0.5	1.1	dB
	8000-12000MHz	0.7	1.4	
	12000-18000MHz	1.1	1.9	
Isolation (500-700MHz)	12	16	--	dB
Isolation (700MHz-18GHz)	15	20	--	dB
Amplitude Unbalance	--	0.2	0.9	dB
Phase Unbalance	--	0.5	10	Degrees
Input Power (CW) ¹	--	--	20	Watts

Mechanical

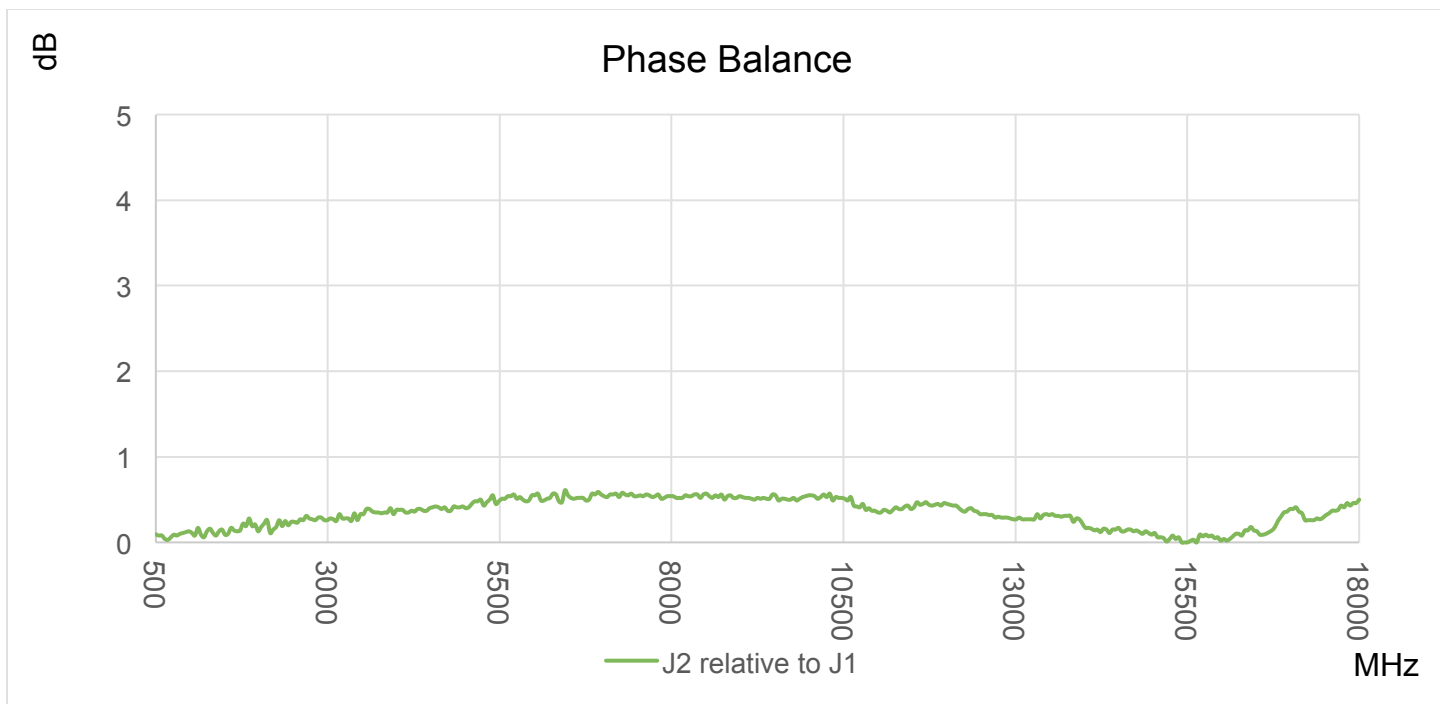
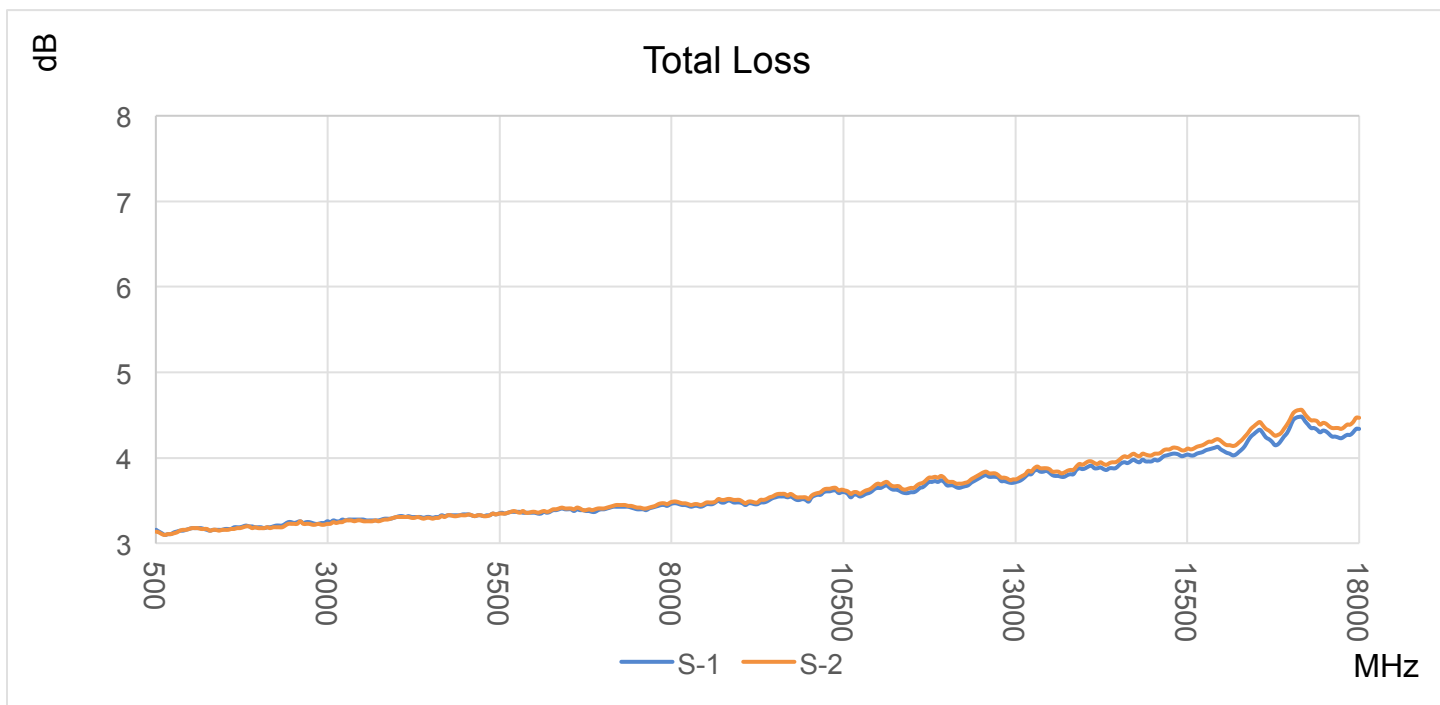
Connector Interface	SMA-Female
Operating Temperature ²	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight Estimate	3.7 oz (105 g)
Humidity	10-90% non-condensing
Environment	Indoors Use Only

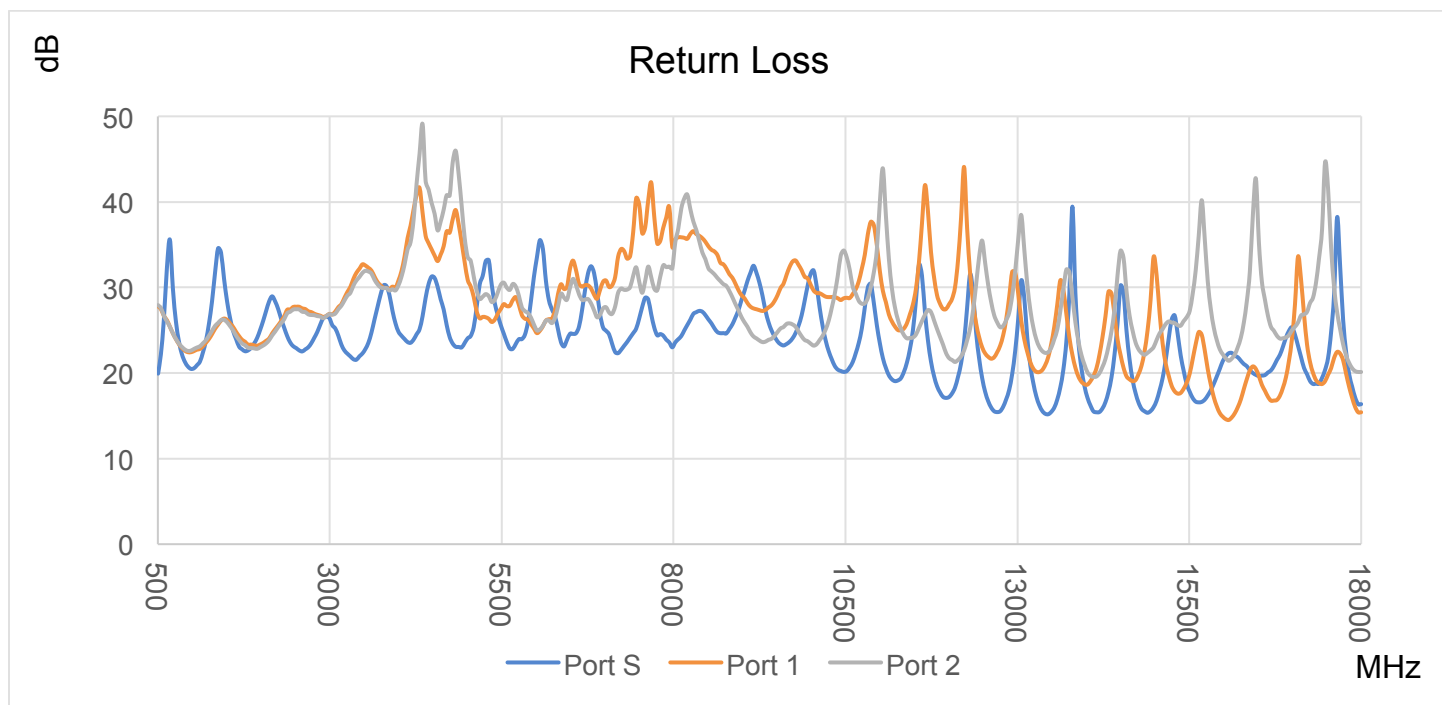
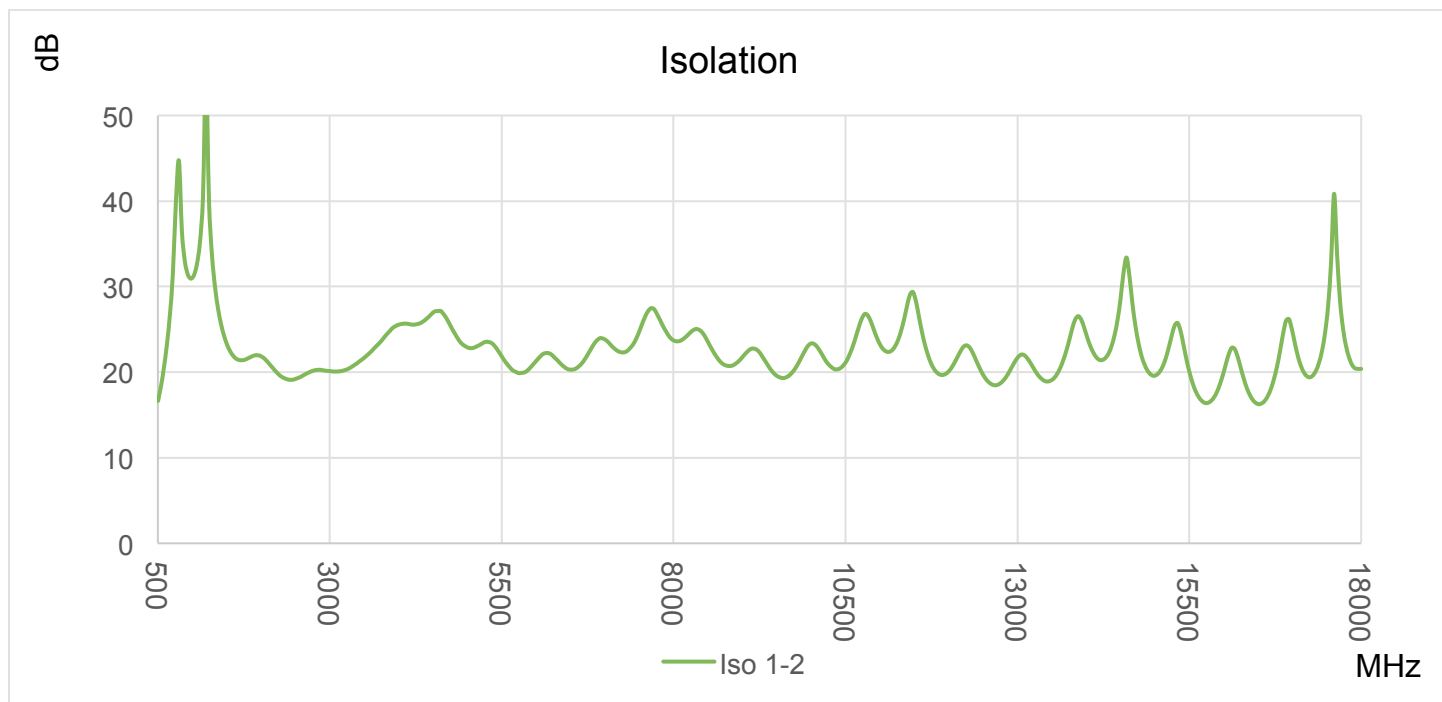
Materials

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

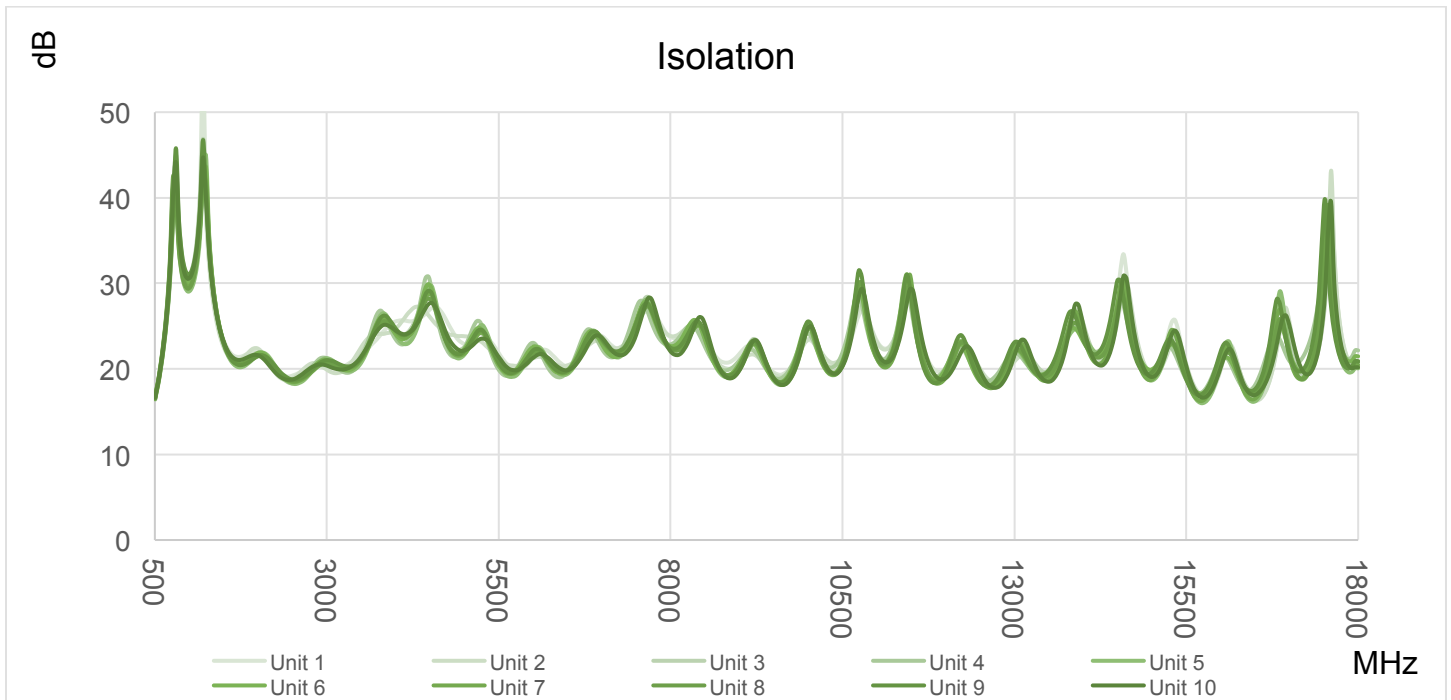
1. All output ports should be terminated in a 50-ohm load with 1.2:1 max VSWR.
2. Electrical specifications at +25 °C only.
3. To the best of our knowledge at the time of publication.

Typical Performance at +25 °C





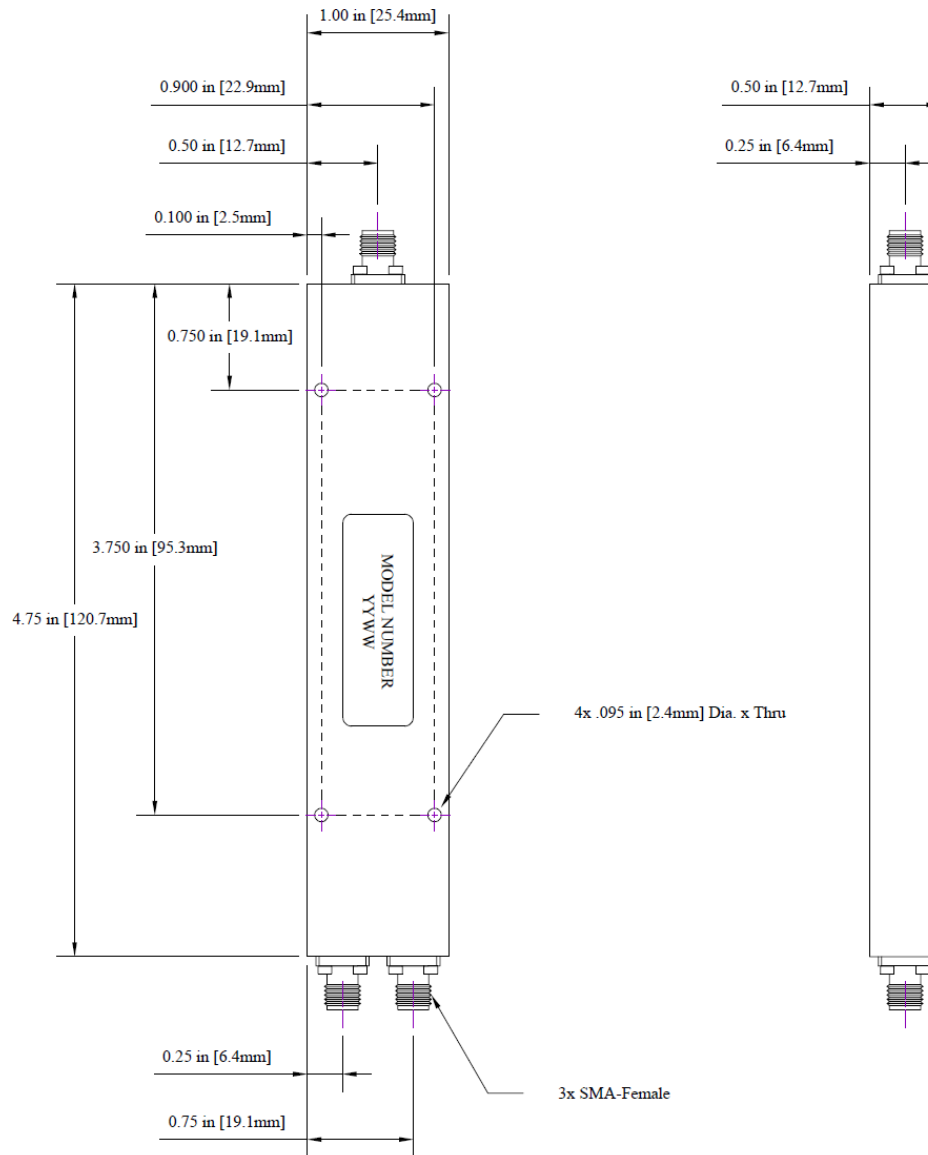
Repeatability in Production



Typical Performance Data

Frequency (MHz)	Return Loss (dB)			Total Loss (dB)		Isolation (dB)
	Port S	Port 1	Port 2	S-1	S-2	
500	19.1	28.0	28.0	3.2	3.1	16.6
1000	20.5	23.4	23.7	3.2	3.2	31.4
1500	27.1	26.8	27.1	3.2	3.1	23.1
2000	28.5	22.4	22.2	3.2	3.3	21.6
2500	22.4	24.6	23.9	3.4	3.4	19.3
3000	24.6	27.3	26.7	3.2	3.2	19.7
3500	29.3	28.6	27.9	3.3	3.3	22.8
4000	22.9	37.6	39.6	3.3	3.3	23.4
4500	26.9	40.7	47.0	3.3	3.3	26.0
5000	27.0	30.0	28.7	3.3	3.3	25.0
5500	22.9	34.5	36.3	3.4	3.4	20.4
6000	25.8	25.4	27.2	3.5	3.5	21.2
6500	22.9	28.9	29.4	3.3	3.4	21.4
7000	23.8	27.2	28.5	3.5	3.5	21.8
7500	27.8	32.9	35.1	3.5	3.5	24.6
8000	23.8	47.9	35.3	3.5	3.5	25.1
8500	29.8	31.1	34.4	3.5	3.5	24.0
9000	26.4	29.0	30.8	3.4	3.4	20.0
9500	23.0	29.9	32.3	3.5	3.5	19.6
10000	32.6	27.0	31.2	3.6	3.6	24.2
10500	19.7	34.8	27.6	3.7	3.7	20.3
11000	20.0	31.7	25.1	3.6	3.6	22.6
11500	24.2	26.3	32.3	3.6	3.7	29.3
12000	17.7	25.5	31.2	3.9	3.8	20.1
12500	18.8	37.6	27.1	3.7	3.8	19.1
13000	25.3	35.0	29.0	3.7	3.7	21.5
13500	17.8	24.2	25.7	3.7	3.8	20.0
14000	19.1	23.3	23.3	3.9	3.9	23.0
14500	27.5	31.3	38.9	3.8	3.9	27.9
15000	17.4	28.6	30.7	3.9	4.0	20.2
15500	20.7	26.3	25.3	3.9	4.0	20.2
16000	32.0	20.9	19.3	3.9	4.0	19.9
16500	20.2	28.9	27.3	4.0	4.1	16.7
17000	23.8	22.2	23.5	4.0	4.1	24.6
17500	17.0	22.7	21.5	4.0	4.2	24.7
18000	15.3	20.4	18.1	4.1	4.3	19.3
18500	29.7	25.5	22.6	4.0	4.1	18.7
19000	17.5	16.3	16.4	4.5	4.6	20.7
19500	13.9	35.3	25.1	4.6	4.8	17.4
20000	21.4	19.2	22.0	4.3	4.4	23.0

Outline Dimensions



Outline drawing: OL-2185

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

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

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