

Power Divider, 4-way, 0.5-6 GHz, SMA Female, Front Mount

ESAT-4PD00506S1

Description

ESAT-4PD00506S1 is a 4-way power splitter covering the continuous bandwidth of 500 MHz to 6 GHz in an enclosure measuring 3.48 x 3.48 x 0.55 inches. The configuration is unique in that the input and output are on the same side, which allows for front panel mounting in rack systems, and internally where space may be limited. The device is RoHS compliant and popular in Wi-Fi, cellular and PCS test systems. It also may be used to cover the upper UHF band, and additionally, L band, S band, and the lower half of C band. Gold plated SMA female connectors provide corrosion resistant ground. The product also covers several of the military letter bands. Assembled and tested in USA.



Photo is representative.

Specifications	Min.	Typ.	Max.	Units
Frequency	500	--	6000	MHz
Impedance	--	50	--	Ohm
Return Loss (Port S)	12.7	17.5	--	dB
Return Loss (Ports 1-4)	14.7	19.1	--	dB
Insertion Loss (above 6.02dB)	500-3000 MHz 3000-6000 MHz	0.7	1.5	dB
		1.0	2.1	
Isolation	17	23	--	dB
Amplitude Balance	--	0.2	0.6	dB
Phase Balance	--	4	10	Degrees
Input Power (CW) ¹	--	--	30	Watts

Mechanical

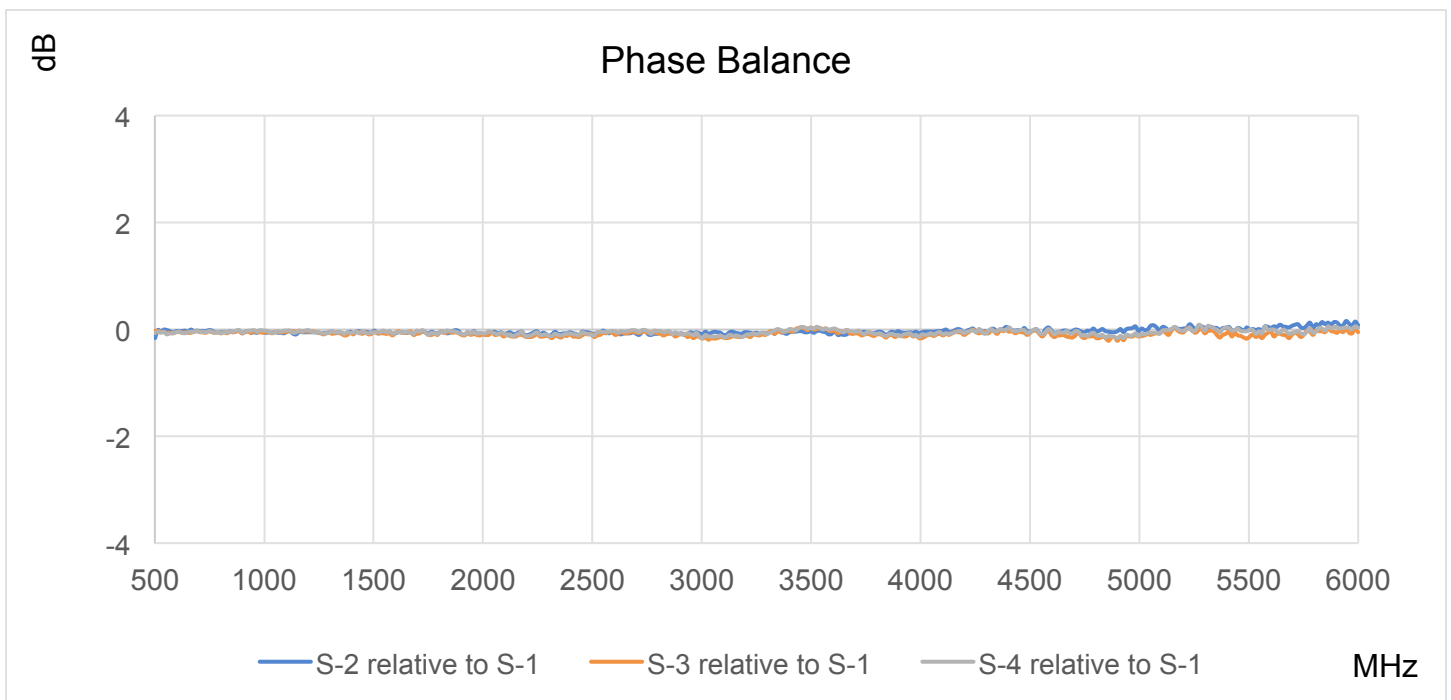
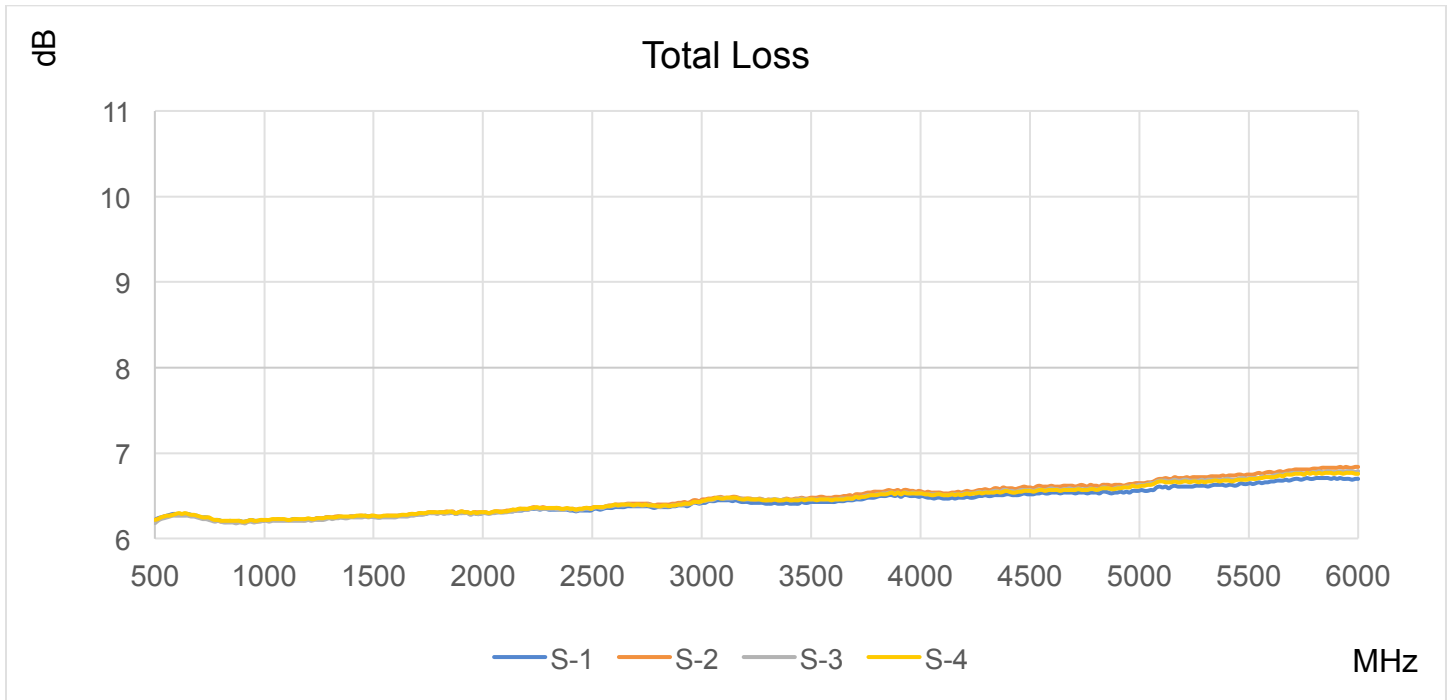
Connector Interface	SMA-Female
Operating Temperature ²	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight Estimate	6 oz (170 g)
Humidity	10-90% non-condensing
Environment	Indoors Use Only

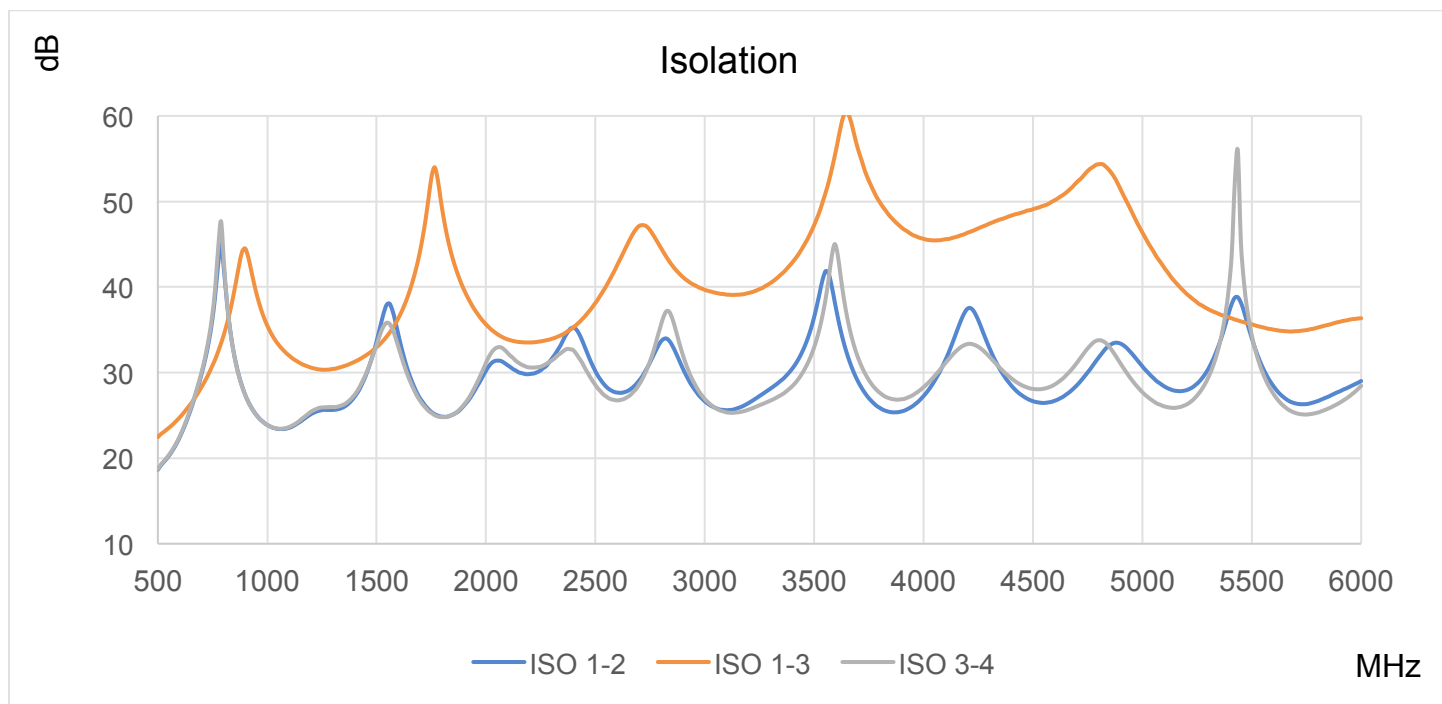
Materials

RoHS Compliant ³	
Enclosure	Aluminum
Connectors	Brass, Gold Plated
Contacts	Be Cu, Gold Plated
Insulators	PTFE
Finish	Green Paint

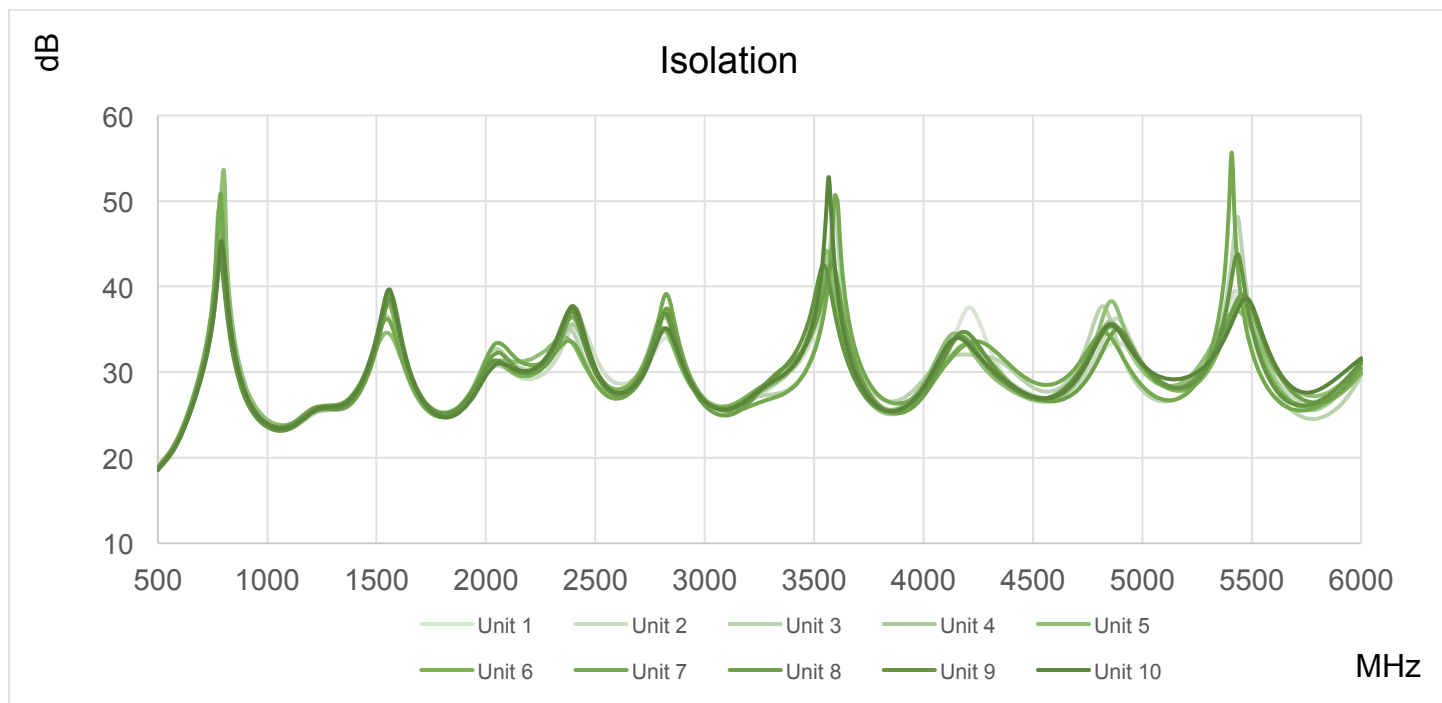
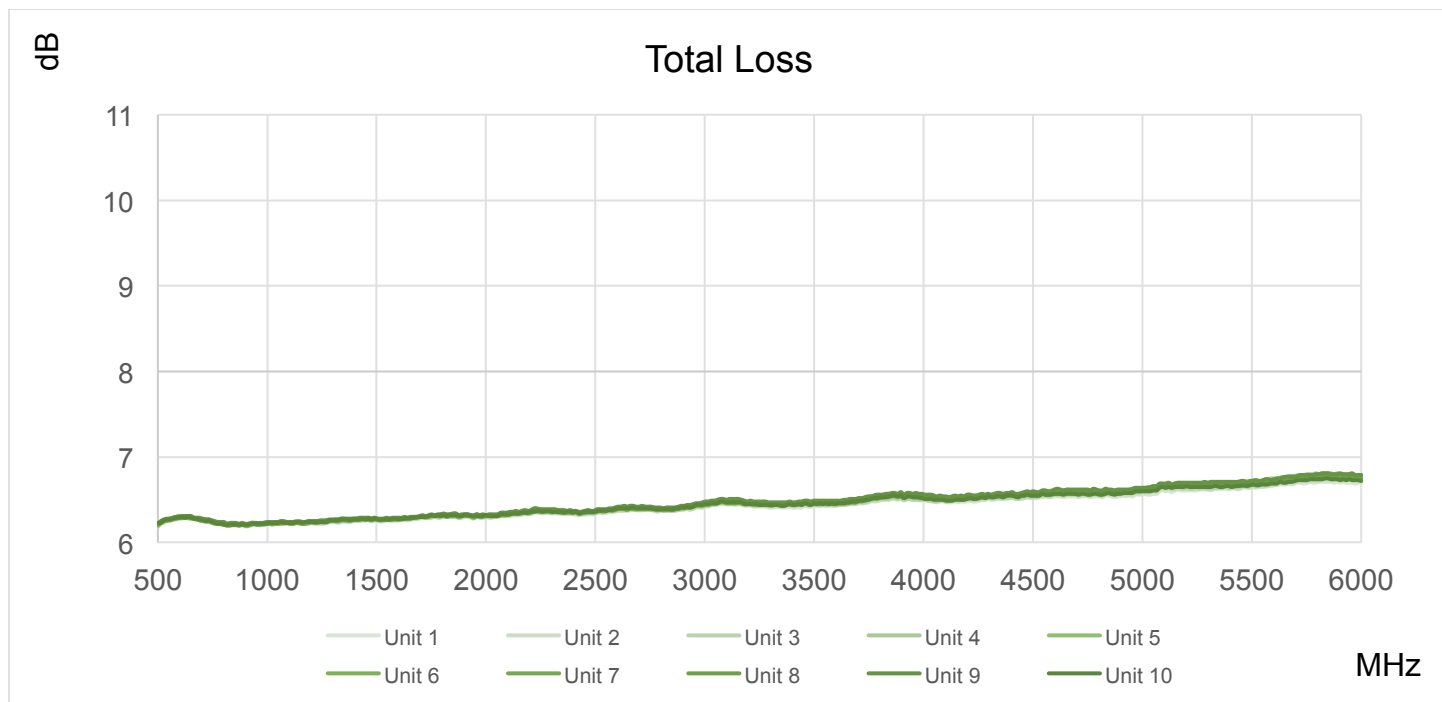
1. All output ports should be terminated in a 50-ohm load with 1.2:1 max VSWR.
2. Electrical specification at +25 °C.
3. To the best of our knowledge at the time of publication.

Typical Performance at +25 °C





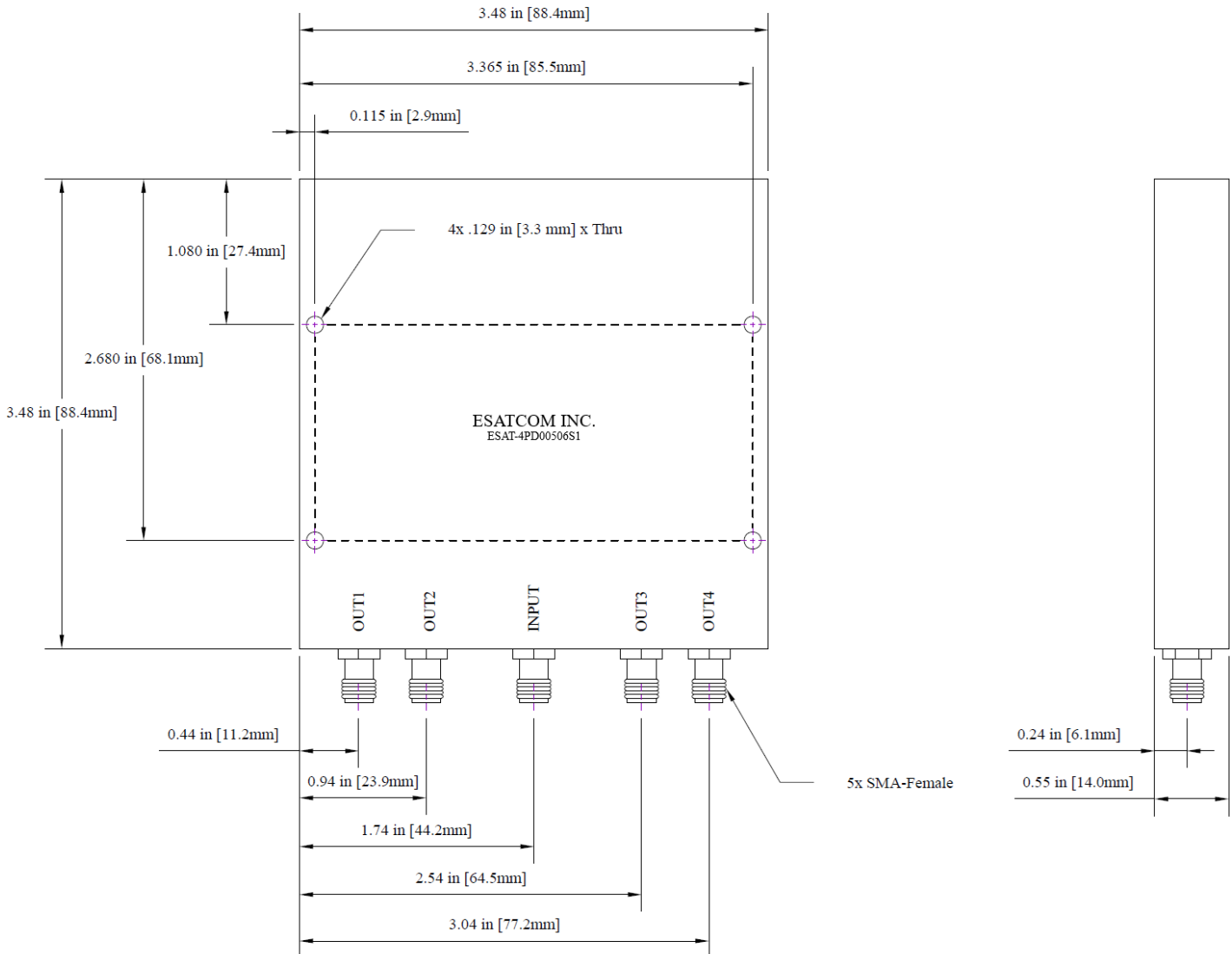
Repeatability in Production



Typical Performance Data

Frequency (MHz)	Return Loss (dB)			Total Loss (dB)		Isolation (dB)	
	Port S	Port 1	Port 4	S-1	S-4	1-2	1-4
500	19.2	46.5	43.6	6.23	6.22	18.6	22.7
550	16.6	39.5	38.4	6.28	6.28	20.2	23.6
600	15.7	33.8	33.4	6.31	6.31	22.3	24.8
650	15.9	30.2	30.2	6.31	6.31	25.7	26.4
700	16.8	28.5	28.6	6.27	6.30	30.4	28.7
750	18.8	27.6	28.0	6.25	6.26	37.2	31.0
800	21.4	27.2	27.8	6.24	6.24	40.0	34.6
850	24.6	27.9	28.7	6.22	6.23	31.0	39.7
900	26.5	29.2	30.3	6.22	6.23	26.9	43.0
950	26.2	31.3	32.8	6.23	6.24	24.8	38.4
1000	25.4	34.1	36.0	6.23	6.24	23.7	35.0
1500	26.3	29.8	30.9	6.29	6.29	33.9	33.1
2000	39.3	39.4	43.4	6.33	6.32	29.5	35.4
2500	28.9	37.5	36.0	6.38	6.36	30.7	36.9
3000	19.9	31.2	29.6	6.48	6.46	26.2	39.2
3500	27.6	32.8	33.1	6.49	6.46	34.9	46.1
4000	21.7	26.6	26.3	6.56	6.52	27.3	40.8
4500	25.7	31.2	30.3	6.59	6.54	27.5	49.7
5000	23.5	34.1	33.2	6.65	6.59	29.9	39.0
5500	32.0	41.4	38.7	6.71	6.66	34.8	40.1
6000	22.2	27.4	27.0	6.81	6.73	30.9	34.8

Outline Dimensions



Outline drawing: OL-4967

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

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

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