

Surface Mount Power Splitter/Combiner

SYPJ-2-13+

2 Way-180° 50Ω 10 to 1000 MHz



Maximum Ratings

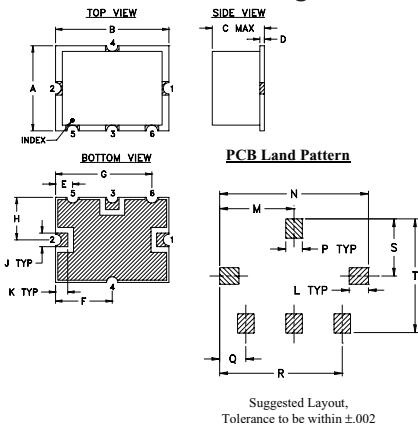
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.125W max.

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

SUM PORT	3
PORT 1 (0°)	1
PORT 2 (180°)	2
GROUND	4,5,6

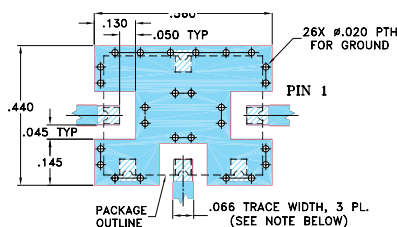
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
.38	.50	.15	.020	.075	.250	.425	.187	.050	.050	.070	.270	.540	.060	.095	.445	.208	.415	grams
9.65	12.70	3.81	0.51	1.91	6.35	10.80	4.75	1.27	1.27	1.78	6.86	13.72	1.52	2.41	11.30	5.28	10.54	0.8

Demo Board MCL P/N: TB-12 Suggested PCB Layout (PL-079)



Features

- wideband, 10 to 1000 MHz
- good isolation, 22 dB typ.
- excellent amplitude unbalance, 0.3 dB typ.

Applications

- VHF/UHF
- cellular
- communication systems

CASE STYLE: TTT166
PRICE: \$6.95 ea. QTY (10-49)

+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

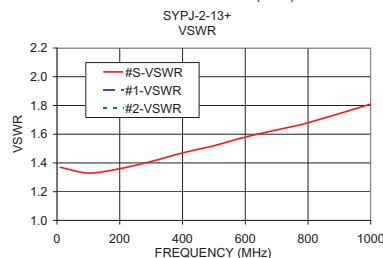
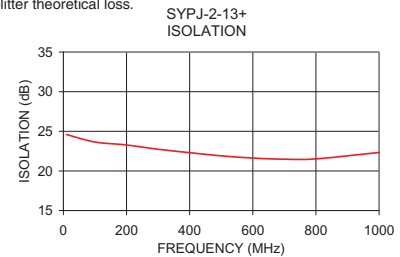
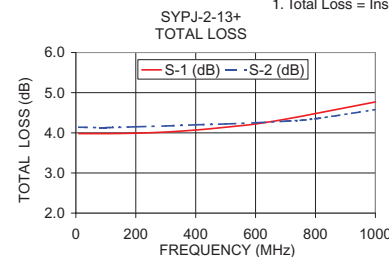
Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency		10		1000	MHz
Insertion Loss (above theoretical 3.0 dB)	10-100 100-500 500-1000	—	1.2 1.3 1.7	1.7 1.8 2.3	dB
Isolation	10-100 100-500 500-1000	20 18 18	24 22 21	—	dB
Phase Unbalance	10-100 100-500 500-1000	—	1.0 4.0 6.0	4.0 8.0 12.0	Degree
Amplitude Unbalance	10-100 100-500 500-1000	—	0.2 0.25 0.3	0.5 0.5 0.7	dB
VSWR (Port S)	10-100 100-500 500-1000	—	1.1 1.3 1.6	—	:1
VSWR (Port 1-2)	10-100 100-500 500-1000	—	1.4 1.5 1.7	—	:1

Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
10	3.98	4.14	0.15	24.59	180.00	1.08	1.34	1.37
100	3.98	4.13	0.15	23.65	179.19	1.09	1.29	1.33
200	3.99	4.15	0.16	23.27	178.46	1.15	1.27	1.36
300	4.02	4.17	0.15	22.74	177.82	1.21	1.26	1.41
400	4.07	4.20	0.13	22.30	177.27	1.26	1.25	1.47
500	4.14	4.22	0.09	21.90	176.79	1.32	1.25	1.52
600	4.22	4.25	0.03	21.63	176.33	1.37	1.26	1.58
700	4.34	4.29	0.05	21.48	175.82	1.43	1.30	1.63
800	4.48	4.35	0.13	21.52	175.23	1.48	1.36	1.68
1000	4.77	4.58	0.20	22.33	173.64	1.61	1.54	1.81

1. Total Loss = Insertion Loss + 3dB splitter theoretical loss.



Electrical Schematic



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