

Surface Mount Power Splitter/Combiner

2 Way-0° 50Ω

2875 to 4200 MHz

SP-2W1+



Generic photo used for illustration purposes only

CASE STYLE: CA531

+RoHS Compliant

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

Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500, 1000

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-65°C to 150°C
Power Input (as a splitter)	0.75W max.
Internal Dissipation	0.375W max.

Pin Connections

SUM PORT	5
PORT 1	1
PORT 2	3
GROUND	2,4,6

Features

- widebandwidth
- low insertion loss, 0.8 dB typ.
- good isolation, 20 dB typ.
- good output VSWR, 1.3:1 typ.
- small size
- aqueous washable

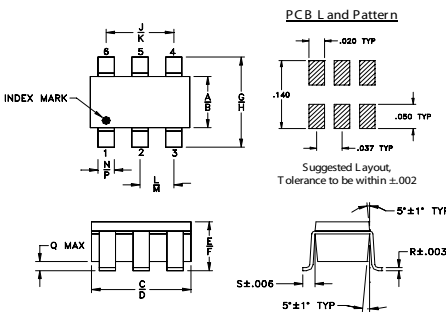
Applications

- WIMAX
- satellite receivers
- defense radar
- line-of-sight links

Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 3.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1)	
	Typ.	Min.	Typ.	Max.			S-Port Typ.	Output Ports Typ.
2875-4200	20	10	0.8	1.4	8	0.2	1.4	1.3

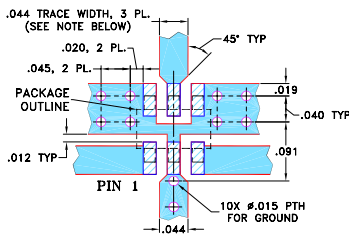
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J
.052	.067	.106	.122	.035	.064	.087	.118	.067
1.32	1.70	2.69	3.10	0.89	1.63	2.21	3.00	1.70
K	L	M	N	P	Q	R	S	wt
.083	.033	.042	.012	.020	.012	.006	.018	grams
2.11	0.84	1.07	0.30	0.51	0.30	0.15	0.46	0.020

Demo Board MCL P/N: TB-374 Suggested PCB Layout (PL-232)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

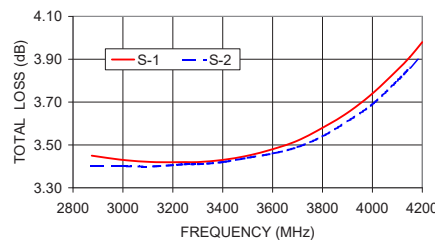
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Typical Performance Data

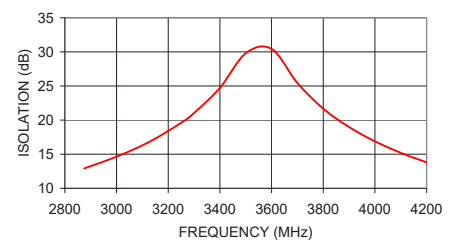
Frequency (MHz)	Total Loss ¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
2875.00	3.45	3.40	0.04	12.92	1.27	1.31	1.28	1.27
3000.00	3.43	3.40	0.03	14.64	1.27	1.26	1.21	1.21
3125.00	3.42	3.40	0.02	16.77	1.28	1.22	1.13	1.14
3250.00	3.42	3.41	0.01	19.60	1.27	1.19	1.07	1.08
3300.00	3.42	3.41	0.01	21.04	1.26	1.18	1.04	1.06
3400.00	3.43	3.42	0.01	24.72	1.24	1.18	1.03	1.01
3500.00	3.45	3.44	0.01	29.80	1.21	1.20	1.08	1.05
3600.00	3.48	3.46	0.02	30.44	1.17	1.24	1.14	1.10
3700.00	3.52	3.49	0.03	25.44	1.16	1.30	1.20	1.16
3800.00	3.58	3.54	0.03	21.67	1.15	1.38	1.27	1.22
3900.00	3.65	3.61	0.04	18.98	1.17	1.47	1.34	1.29
4000.00	3.74	3.69	0.04	16.88	1.17	1.59	1.42	1.37
4100.00	3.85	3.80	0.05	15.20	1.19	1.72	1.51	1.45
4150.00	3.91	3.86	0.05	14.48	1.18	1.79	1.55	1.49
4200.00	3.98	3.92	0.06	13.81	1.20	1.87	1.59	1.53

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

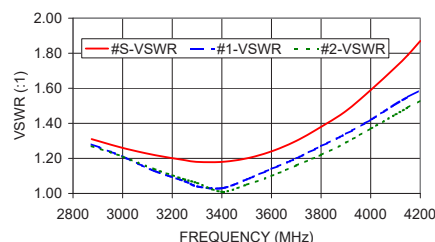
SP-2W1+
TOTAL LOSS



SP-2W1+
ISOLATION



SP-2W1+
VSWR



electrical schematic



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