Surface Mount

Power Splitter/Combiner

SP-2P1+

2 Way-0° 50Ω 1350 to 2250 MHz

CASE STYLE: CA531
PRICE: $0.99 ea. QTY (25)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-65°C to 150°C
Power Input (as a splitter)	1.5W max.
Internal Dissipation	0.75W max.

Pin Connections

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

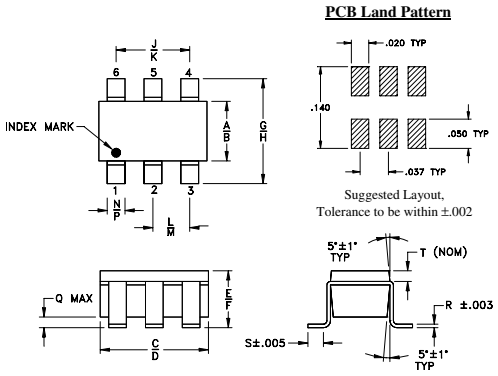
Features

- wide bandwidth
- low insertion loss, 0.5 dB typ.
- good isolation, 20 dB typ.
- excellent output VSWR, 1.2:1 typ.
- excellent power handling, 1.5W
- small size

Applications

- PCS/DCS
- communication systems
- mobile
- PDC
- GPS
- GSM

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	T	wt
.083	.033	.042	.012	.020	.012	.007	.020	.012	grams
2.11	0.84	1.07	0.30	0.51	0.30	0.18	0.51	0.30	0.020

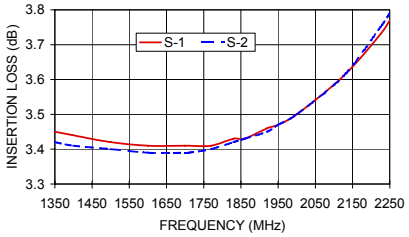
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 3.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1)	
	Typ.	Min.	Typ.	Max.	Max.	Max.	S-Port Typ.	Output Ports Typ.
1350-2250	20	9	0.5	1.1	4	0.2	1.3	1.2

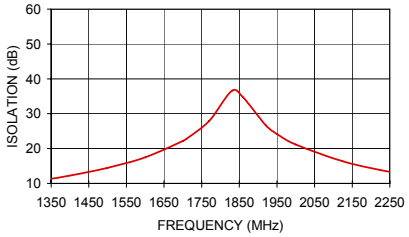
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB) S-1	Insertion Loss (dB) S-2	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
1350.00	3.45	3.42	0.03	11.34	0.43	1.40	1.28	1.26
1400.00	3.44	3.41	0.03	12.25	0.42	1.36	1.24	1.22
1500.00	3.42	3.40	0.02	14.49	0.42	1.30	1.16	1.14
1600.00	3.41	3.39	0.02	17.51	0.42	1.24	1.08	1.06
1700.00	3.41	3.39	0.01	22.19	0.43	1.21	1.00	1.01
1710.00	3.41	3.39	0.01	22.82	0.43	1.21	1.00	1.02
1770.00	3.41	3.40	0.01	27.94	0.44	1.20	1.05	1.06
1830.00	3.43	3.42	0.01	36.58	0.47	1.21	1.10	1.11
1860.00	3.43	3.43	0.01	34.67	0.48	1.22	1.12	1.13
1920.00	3.46	3.45	0.00	26.70	0.50	1.26	1.17	1.18
1950.00	3.47	3.47	0.00	24.20	0.52	1.28	1.19	1.20
2000.00	3.50	3.50	0.00	21.14	0.55	1.33	1.23	1.25
2125.00	3.61	3.61	0.01	16.35	0.65	1.49	1.34	1.35
2225.00	3.73	3.75	0.01	13.84	0.75	1.66	1.42	1.42
2250.00	3.77	3.79	0.01	13.32	0.74	1.71	1.44	1.44

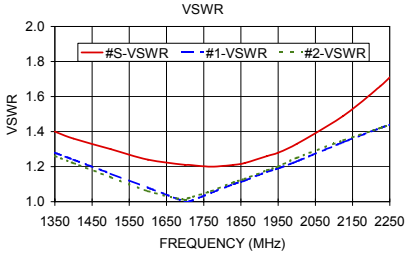
SP-2P1+
INSERTION LOSS



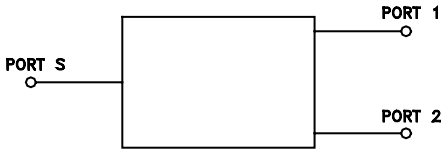
SP-2P1+
ISOLATION



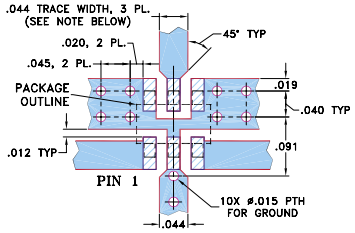
SP-2P1+
VSWR



electrical schematic



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

ESD Rating
Human Body Model (HBM): Class 1A (250 v to <500 v) in accordance with ANSI/ESD STM 5.1 - 2001
Machine Model (MM): Class M1 (< 100 v) in accordance with ANSI/ESD STM 5.2 - 1999 (pass 50V)