

Power Splitter/Combiner

SP-2C1+

2 Way-0° 50Ω

640 to 1100 MHz



CASE STYLE: CA531

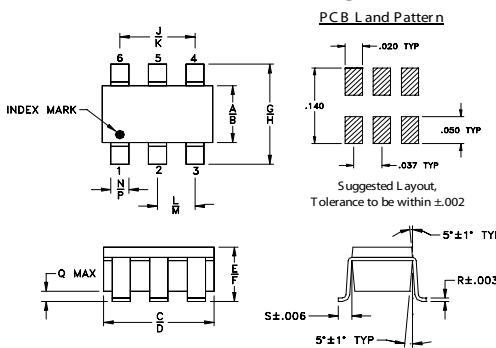
Maximum Ratings

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

Pin Connections

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

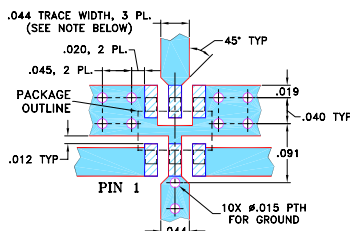
Outline Drawing



Outline Dimensions (inch)

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

Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

Features

- wide bandwidth
- good isolation, 20 dB typ.
- excellent VSWR, 1.25:1 typ.
- excellent power handling, 1.5W
- small size
- aqueous washable

Applications

- cellular
- GSM
- Land Mobile
- ISM
- PDC

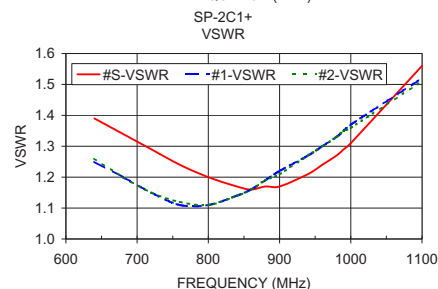
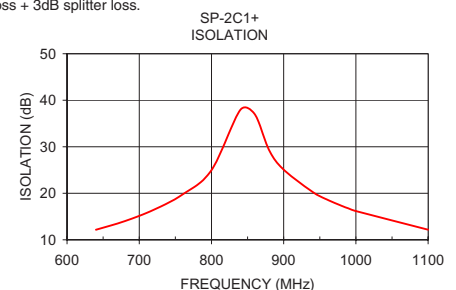
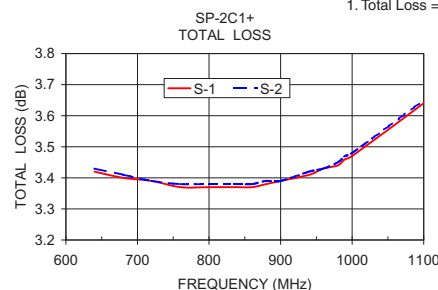
Electrical Specifications

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.
640-1100	20	10	0.4	1.0	2	0.2	1.25	1.25

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						
640.00	3.42	3.43	0.01	12.16	0.05	1.39	1.25	1.26
680.00	3.40	3.41	0.01	14.02	0.05	1.34	1.20	1.20
720.00	3.39	3.39	0.01	16.44	0.05	1.29	1.15	1.15
760.00	3.37	3.38	0.01	19.75	0.04	1.24	1.11	1.12
800.00	3.37	3.38	0.01	24.99	0.04	1.20	1.11	1.11
840.00	3.37	3.38	0.01	37.94	0.04	1.17	1.14	1.14
860.00	3.37	3.38	0.01	36.99	0.04	1.16	1.16	1.16
880.00	3.38	3.39	0.01	29.21	0.04	1.17	1.19	1.19
900.00	3.39	3.39	0.01	25.08	0.04	1.17	1.22	1.21
940.00	3.41	3.42	0.01	20.29	0.03	1.21	1.27	1.27
960.00	3.43	3.43	0.01	18.66	0.02	1.24	1.30	1.30
980.00	3.44	3.45	0.01	17.32	0.03	1.27	1.33	1.33
990.00	3.46	3.47	0.01	16.73	0.03	1.29	1.35	1.35
1000.00	3.47	3.48	0.01	16.18	0.03	1.31	1.37	1.36
1100.00	3.64	3.65	0.01	12.18	0.04	1.56	1.52	1.51

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



electrical schematic



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)

