

# Surface Mount Power Splitter/Combiner

2 Way-0° 50Ω

780 to 960 MHz

## SP-2C+



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

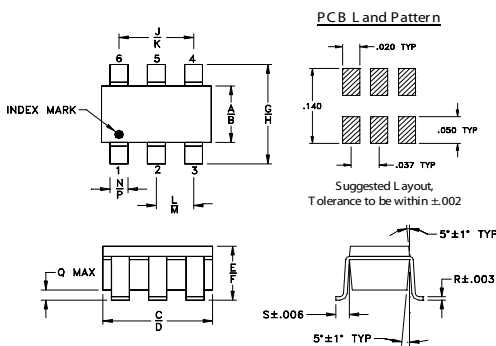
Operating Temperature	-40°C to 85°C
Storage Temperature	-65°C to 150°C
Power Input (as a splitter)	1.5W max.
Internal Dissipation	0.75W max.

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



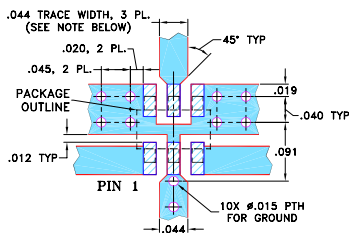
### Outline Dimensions (inch)

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

- A. 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.  
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
C. The parts covered by this specification document are subject to Mini-Circuit's 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-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

### Features

- low insertion loss, 0.4 dB typ.
- good isolation, 28 dB typ.
- excellent VSWR, 1.20:1 typ.
- excellent power handling, 1.5W
- small size
- aqueous washable

### Applications

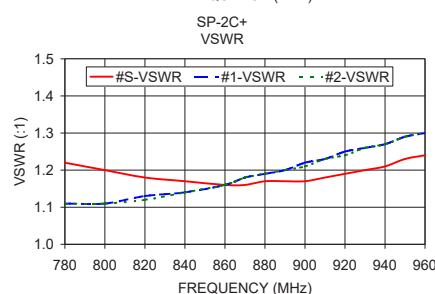
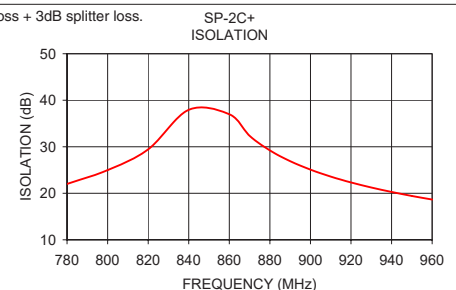
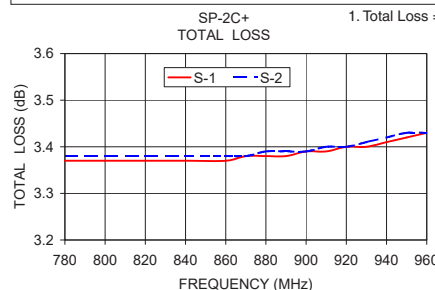
- cellular
- GSM
- Land Mobile
- ISM
- PDC

### 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.
780-960	28	17	0.4	0.6	2	0.2	1.20	1.20

### Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
780.00	3.37	3.38	0.01	22.00	0.05	1.22	1.11	1.11
800.00	3.37	3.38	0.01	24.99	0.04	1.20	1.11	1.11
820.00	3.37	3.38	0.01	29.45	0.04	1.18	1.13	1.12
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
870.00	3.38	3.38	0.01	32.35	0.04	1.16	1.18	1.18
880.00	3.38	3.39	0.01	29.21	0.04	1.17	1.19	1.19
890.00	3.38	3.39	0.01	26.90	0.05	1.17	1.20	1.20
900.00	3.39	3.39	0.01	25.08	0.04	1.17	1.22	1.21
910.00	3.39	3.40	0.01	23.59	0.04	1.18	1.23	1.23
920.00	3.40	3.40	0.01	22.33	0.04	1.19	1.25	1.24
930.00	3.40	3.41	0.01	21.24	0.03	1.20	1.26	1.26
940.00	3.41	3.42	0.01	20.29	0.03	1.21	1.27	1.27
950.00	3.42	3.43	0.01	19.43	0.02	1.23	1.29	1.29
960.00	3.43	3.43	0.01	18.66	0.02	1.24	1.30	1.30



### 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)

**Mini-Circuits®**

[www.minicircuits.com](http://www.minicircuits.com) P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

REV. C  
M151107  
ED-12348C/1+  
SP-2C+  
PI/LC/CP/AM  
200428

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Signal Conditioning](#) category:*

*Click to view products by [Mini-Circuits](#) manufacturer:*

Other Similar products are found below :

[MAPDCC0001](#) [MAPDCC0004](#) [PD0409J5050S2HF](#) [880157](#) [HHS-109-PIN](#) [DC1417J5005AHF](#) [AFS14A30-2185.00-T3](#) [AFS14A35-1591.50-T3](#) [DS-323-PIN](#) [B39321R801H210](#) [1A0220-3](#) [JP510S](#) [LFB212G45SG8C341](#) [LFB322G45SN1A504](#) [LFL182G45TC3B746](#) [SF2159E](#) [30057](#)  
[FM-104-PIN](#) [CER0813B](#) [MAPDCC0005](#) [3A325](#) [40287](#) [41180](#) [ATB3225-75032NCT](#) [BD0810N50100AHF](#) [BD2425J50200AHF](#)  
[C5060J5003AHF](#) [JHS-115-PIN](#) [JP503AS](#) [DC0710J5005AHF](#) [DC2327J5005AHF](#) [DC3338J5005AHF](#) [43020](#) [LFB2H2G60BB1C106](#)  
[LFL15869MTC1B787](#) [X3C19F1-20S](#) [XC3500P-20S](#) [10013-20](#) [SF2194E](#) [CDBLB455KCAX39-B0](#) [TGL2208-SM, EVAL](#) [RF1353C](#)  
[PD0922J5050D2HF](#) [1E1305-3](#) [1G1304-30](#) [B0922J7575AHF](#) [2020-6622-20](#) [TP-102-PIN](#) [TP-103-PIN](#) [BD1222J50200AHF](#)