

Surface Mount Power Splitter/Combiner

SP-2U2+

2 Way-0° 50Ω 1720 to 2850 MHz



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

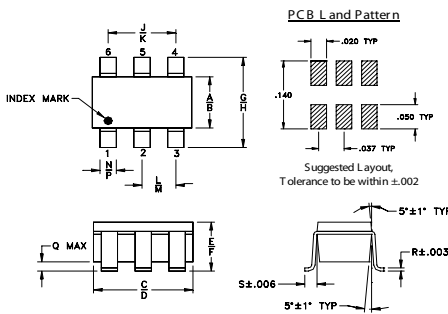
Maximum Ratings

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

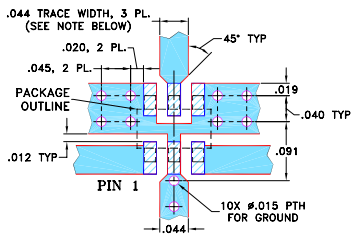
Outline Drawing



Outline Dimensions (inch/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

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

Features

- wide bandwidth
- low insertion loss, 0.5 dB typ.
- good isolation, 17 dB typ.
- good output VSWR, 1.26:1 typ.
- excellent power handling, 1.5W
- small size
- aqueous washable

Applications

- bluetooth
- WCDMA
- IEEE 802.11b, g
- PCS
- Wi-Fi

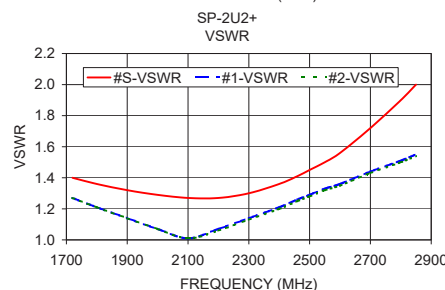
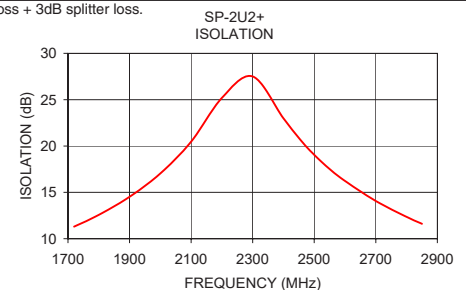
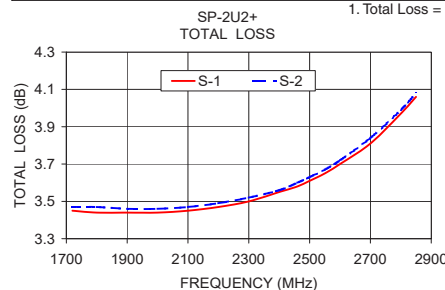
Electrical Specifications

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.
1720-2850	17	9	0.5	1.4	3	0.2	1.5	1.26

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						
1720.00	3.45	3.47	0.02	11.30	0.66	1.40	1.27	1.27
1800.00	3.44	3.47	0.02	12.57	0.68	1.36	1.21	1.21
1900.00	3.44	3.46	0.02	14.52	0.66	1.32	1.14	1.14
2000.00	3.44	3.46	0.02	17.04	0.62	1.29	1.07	1.07
2100.00	3.45	3.47	0.02	20.47	0.74	1.27	1.01	1.01
2200.00	3.47	3.49	0.02	25.19	0.73	1.27	1.07	1.06
2300.00	3.50	3.52	0.02	27.51	0.73	1.30	1.14	1.13
2400.00	3.55	3.56	0.01	22.99	0.75	1.36	1.21	1.20
2460.00	3.58	3.60	0.02	20.48	0.81	1.41	1.26	1.25
2500.00	3.61	3.63	0.02	19.05	0.83	1.45	1.29	1.28
2550.00	3.65	3.67	0.02	17.52	0.83	1.50	1.33	1.32
2600.00	3.70	3.72	0.02	16.23	0.82	1.56	1.36	1.35
2700.00	3.81	3.84	0.02	14.07	0.84	1.72	1.44	1.43
2800.00	3.97	3.99	0.02	12.36	0.85	1.90	1.51	1.50
2850.00	4.06	4.08	0.02	11.61	0.80	2.00	1.55	1.54

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)



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