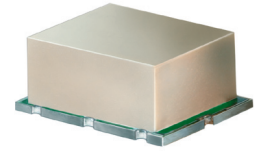


Surface Mount

# Power Splitter/Combiner

2 Way-0° 50Ω 2 to 500 MHz

## SYPS-2-1+ SYPS-2-1



CASE STYLE: TTT167  
PRICE: \$7.95 ea. QTY. (1-9)

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

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

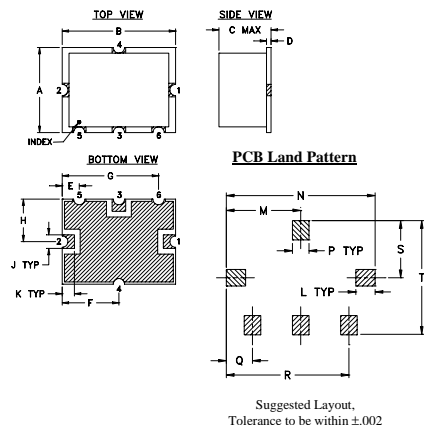
### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.125W max.
Permanent damage may occur if any of these limits are exceeded.	

### Pin Connections

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

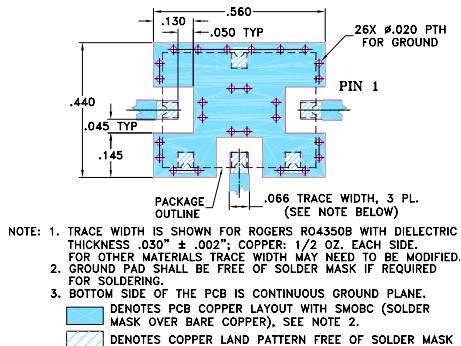
### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K
.38	.50	.23	.020	.075	.250	.425	.187	.050	.050
9.65	12.70	5.84	0.51	1.91	6.35	10.80	4.75	1.27	1.27
L	M	N	P	Q	R	S	T	wt.	
.070	.270	.540	.060	.095	.445	.208	.415	grams	
1.78	6.86	13.72	1.52	2.41	11.30	5.28	10.54	0.8	

### Demo Board MCL P/N: TB-12 Suggested PCB Layout (PL-079)



### Features

- wideband, 2 to 500 MHz
- low insertion loss, 0.3 dB typ.
- high isolation, 32 dB typ.

### Applications

- VHF/UHF
- communications systems
- receivers & transmitters
- instrumentation

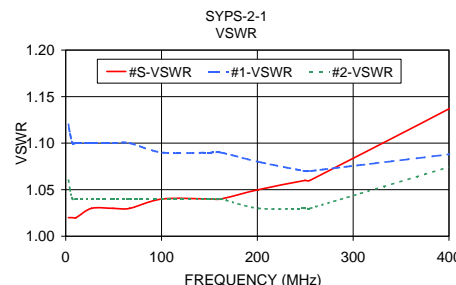
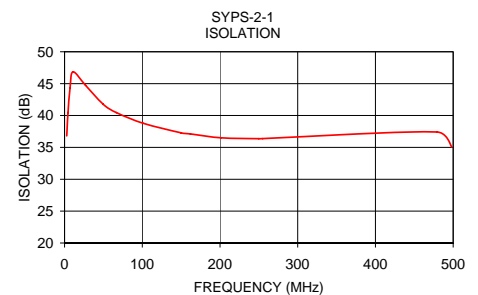
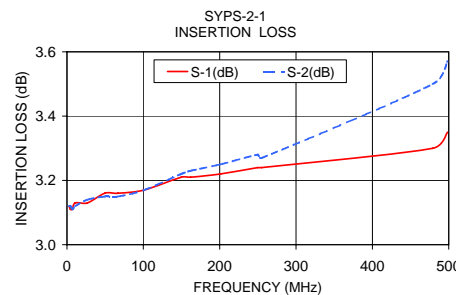
### Splitter Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 3.0 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L	M	U	L	M	U
$f_L$ - $f_U$	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
2-500	40	20	32	20	30	20	0.2	0.6	0.3	0.75	0.6	1.0	2.0	3.0	4.0	0.2	0.3	0.5

L = low range [ $f_L$  to  $10 f_L$ ] M = mid range [ $10 f_L$  to  $f_U/2$ ] U = upper range [ $f_U/2$  to  $f_U$ ]

### Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
2.84	3.12	3.12	0.00	36.81	0.01	1.02	1.12	1.06
4.47	3.11	3.12	0.00	40.46	0.02	1.02	1.11	1.05
7.03	3.11	3.11	0.00	44.30	0.01	1.02	1.10	1.04
10.86	3.13	3.12	0.01	46.85	0.03	1.02	1.10	1.04
26.91	3.13	3.14	0.00	44.74	0.07	1.03	1.10	1.04
49.59	3.16	3.15	0.00	41.78	0.08	1.03	1.10	1.04
66.66	3.16	3.15	0.00	40.46	0.18	1.03	1.10	1.04
100.87	3.17	3.17	0.00	38.79	0.28	1.04	1.09	1.04
149.64	3.21	3.22	0.01	37.29	0.35	1.04	1.09	1.04
161.93	3.21	3.23	0.01	37.11	0.39	1.04	1.09	1.04
201.16	3.22	3.25	0.03	36.51	0.47	1.05	1.08	1.03
249.89	3.24	3.28	0.04	36.36	0.52	1.06	1.07	1.03
254.97	3.24	3.27	0.03	36.38	0.59	1.06	1.07	1.03
479.07	3.30	3.50	0.20	37.41	0.80	1.18	1.10	1.10
498.34	3.35	3.57	0.22	35.04	0.75	1.20	1.12	1.12



### electrical schematic



**Mini-Circuits®**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shopping online see web site

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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](http://www.minicircuits.com/MCLStore/terms.jsp).

REV.B  
M11708  
SYPS-2-1  
HY/TD/AM  
090824