

# Power Splitter/Combiner

## SYPS-2-252+

2 Way-0° 50Ω 5 to 2500 MHz



Generic photo used for illustration purposes only

CASE STYLE: AH202

**+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 13" Devices/Reel 200

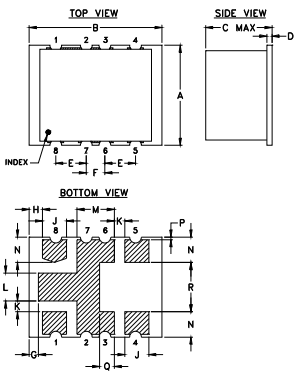
### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.05W max.
Permanent damage may occur if any of these limits are exceeded.	

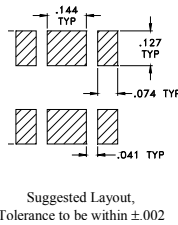
### Pin Connections

SUM PORT	8
PORT 1	4
PORT 2	5
GROUND	1,2,3,6,7

### Outline Drawing



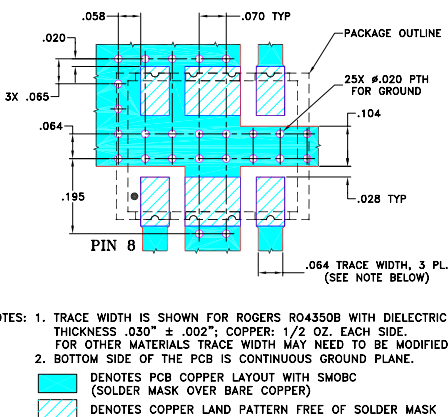
### PCB Land Pattern



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K
.38	.50	.25	.020	.115	.070	.035	.050	.090	.040
9.65	12.70	6.35	0.51	2.92	1.78	0.89	1.27	2.29	1.02
L	M	N	P	Q	R	S	T	wt	
.105	.140	.095	.010	.055	.185	--	--	grams	
2.67	3.56	2.41	0.25	1.40	4.70	--	--	0.52	

### Demo Board MCL P/N: TB-427+ Suggested PCB Layout (PL-274)



### 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-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

- wideband, 5 to 2500 MHz. useable 0.5 to 2800 MHz
- low amplitude unbalance, 0.1 dB typ.
- low phase unbalance, 1 deg. typ.

### Applications

- VHF/UHF
- communications systems
- receivers & transmitters
- instrumentation
- CATV
- cellular, GPS, PCS

### Electrical Specifications

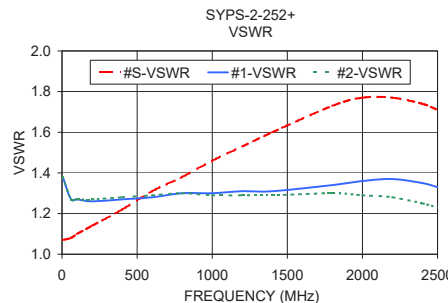
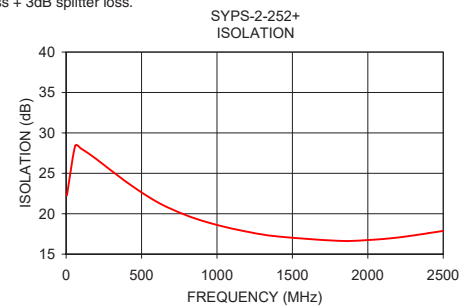
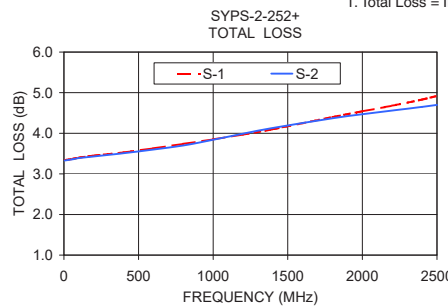
FREQ. RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB) ABOVE 3.0 dB			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)					
	L	M	U	L	M	U	L	M	U	L	M	U			
5-2500	24	15	18	15	17	14	0.4	0.6	0.7	1.0	3.0	5.0	0.1	0.3	0.5

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)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
5.00	3.34	3.33	0.01	22.24	0.00	1.07	1.38	1.38
60.00	3.37	3.36	0.01	28.39	0.05	1.08	1.27	1.27
100.00	3.40	3.39	0.01	28.04	0.06	1.10	1.27	1.27
200.00	3.45	3.43	0.01	26.77	0.12	1.14	1.26	1.27
400.00	3.53	3.51	0.03	23.93	0.25	1.22	1.27	1.28
600.00	3.63	3.60	0.04	21.49	0.42	1.31	1.28	1.29
800.00	3.74	3.70	0.04	19.78	0.56	1.38	1.30	1.30
1000.00	3.85	3.84	0.01	18.61	0.61	1.46	1.30	1.29
1200.00	3.97	3.99	0.02	17.78	0.61	1.53	1.31	1.29
1400.00	4.10	4.13	0.02	17.19	0.50	1.60	1.31	1.29
1800.00	4.40	4.37	0.03	16.65	0.09	1.73	1.34	1.30
2000.00	4.54	4.47	0.07	16.74	0.07	1.77	1.36	1.29
2200.00	4.68	4.56	0.13	17.06	0.17	1.77	1.37	1.28
2400.00	4.83	4.65	0.18	17.59	0.20	1.74	1.35	1.25
2500.00	4.92	4.70	0.22	17.88	0.19	1.71	1.33	1.23

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



### electrical schematic

