Surface Mount

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	Devices/Reel
13"	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

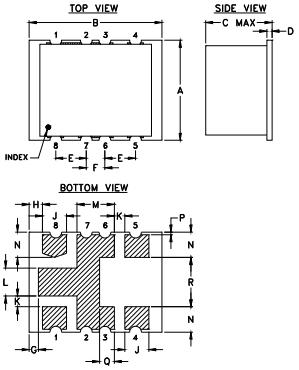
Features

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

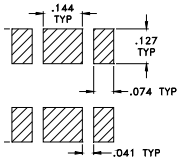
Applications

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

Outline Drawing



PCB Land Pattern



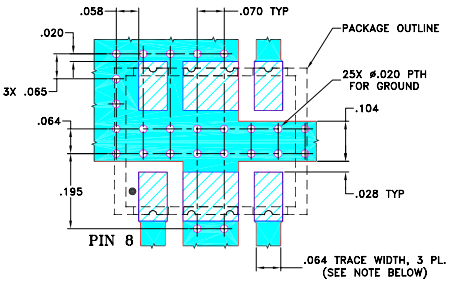
Suggested Layout,
Tolerance to be within ±.002

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: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; 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

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.
5-2500	24	15	18	15	17	14	0.4	0.6	0.7	1.4	1.3	2.4	1.0	3.0	5.0	0.1	0.3	0.5

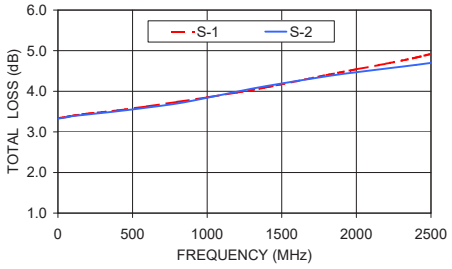
L = low range [f_L to 10 f_L] M = mid range [10 f_L to f_U/2] U= upper range [f_U/2 to f_U]

Typical Performance Data

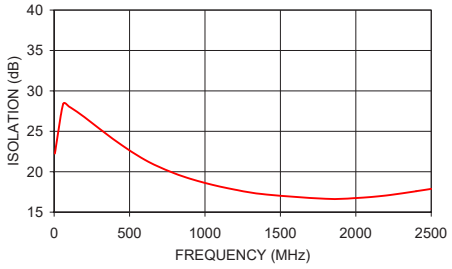
Frequency (MHz)	Total Loss[1] (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
5.00	3.34	3.33	0.01	22.24	0.00	1.07	1.38	1.38
60.00	3.37	3.36	0.01	28.39	0.05	1.08	1.27	1.27
100.00	3.40	3.39	0.01	28.04	0.06	1.10	1.27	1.27
200.00	3.45	3.43	0.01	26.77	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.

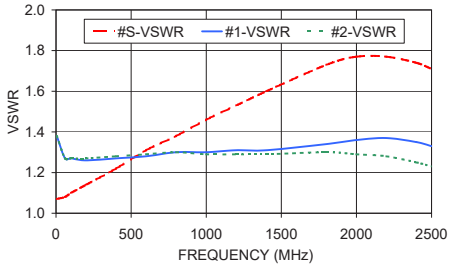
SYPS-2-252+
TOTAL LOSS



SYPS-2-252+
ISOLATION



SYPS-2-252+
VSWR



electrical schematic



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-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