

# Power Splitter/Combiner

## SYPS-2-282-75+

2 Way-0° 75Ω 5 to 2750 MHz

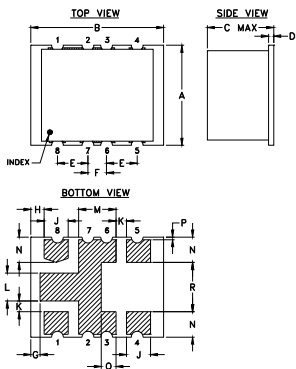
### Maximum Ratings

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.	

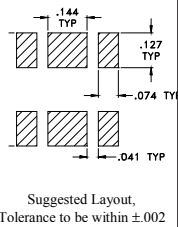
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern

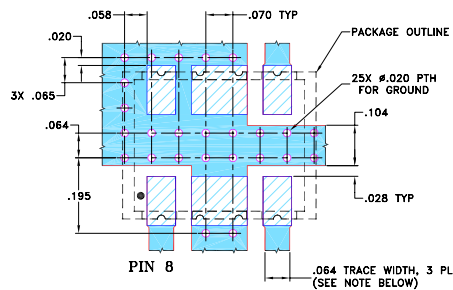


Suggested Layout, Tolerance to be within ±.002

### 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-426+ Suggested PCB Layout (PL-268)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .060 ± .004; 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

- 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-Circuits' applicable established test performance criteria and measurement instructions.
- 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](http://www.minicircuits.com/MCLStore/terms.jsp)

### Features

- wideband, 5 to 2750 MHz. useable 0.5 to 3000 MHz
- low insertion loss, 0.8 dB typ.
- high isolation, 25 dB typ.

### Applications

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



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

### Electrical Specifications

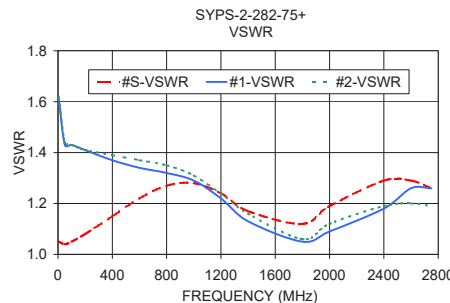
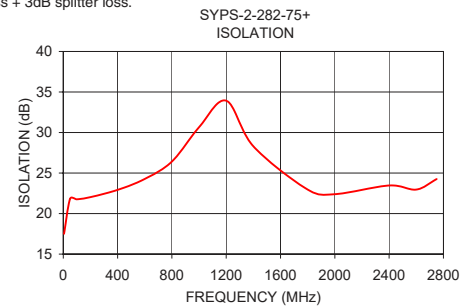
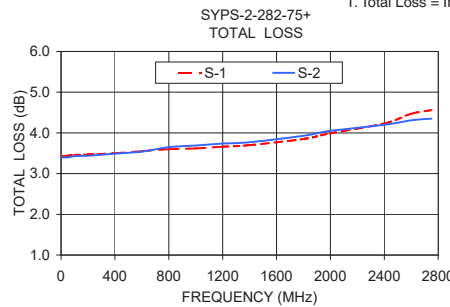
FREQ. RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB) ABOVE 3.0 dB			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)								
	L	M	U	L	M	U	L	M	U	L	M	U						
	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Max.	Typ. Max.	Typ. Max.	Max.	Max.	Max.	Max.	Max.	Max.						
$f_L$ - $f_U$	20	12	25	18	22	13	0.5	0.7	0.8	1.1	1.5	2.7	2.0	4.0	6.0	0.2	0.4	1.0
5-2750																		

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	3.43	3.40	0.03	17.50	0.12	1.05	1.61	1.62
50.00	3.44	3.40	0.04	21.82	0.01	1.04	1.43	1.44
100.00	3.46	3.43	0.03	21.76	0.06	1.05	1.43	1.43
200.00	3.47	3.44	0.03	22.03	0.23	1.08	1.41	1.41
400.00	3.50	3.49	0.02	22.92	0.48	1.15	1.37	1.39
600.00	3.55	3.54	0.02	24.27	0.70	1.22	1.34	1.37
800.00	3.60	3.65	0.05	26.42	0.83	1.27	1.32	1.35
1000.00	3.62	3.69	0.07	30.66	0.96	1.28	1.29	1.31
1200.00	3.66	3.74	0.08	33.93	1.24	1.24	1.22	1.24
1400.00	3.70	3.77	0.06	28.30	0.92	1.17	1.13	1.16
1800.00	3.85	3.93	0.08	22.96	0.63	1.12	1.05	1.06
2000.00	3.99	4.05	0.06	22.39	0.42	1.19	1.09	1.12
2400.00	4.23	4.20	0.04	23.46	0.16	1.29	1.18	1.19
2600.00	4.47	4.31	0.16	22.96	0.39	1.29	1.26	1.20
2750.00	4.56	4.35	0.21	24.26	0.54	1.26	1.26	1.19

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



### electrical schematic

