

# Power Splitter/Combiner

SYPS-3-12W-75+

3 Way-0° 75Ω

20 to 1200 MHz



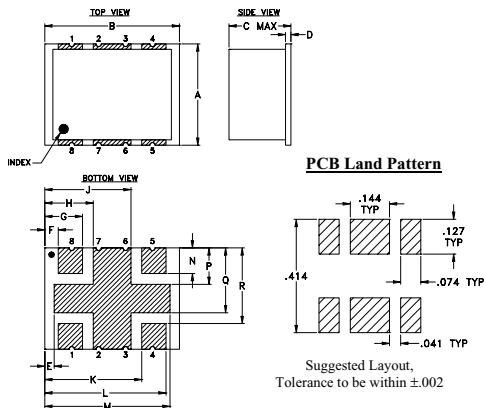
## Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.15 W max.

## Pin Connections

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

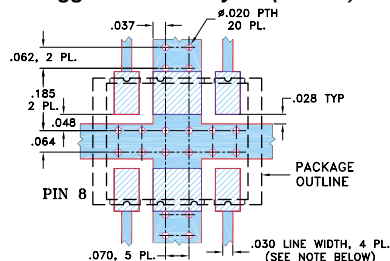
## Outline Drawing



## Outline Dimensions (inch)

A	B	C	D	E	F	G	H	
.38	.500	.25	.020	0.35	.050	.140	.180	
9.65	12.70	6.35	0.51	8.89	1.27	3.56	4.57	
J	K	L	M	N	P	Q	R	wt
.320	.360	.450	.465	.095	.135	.240	.280	grams
8.13	9.14	11.43	11.81	2.41	3.43	6.10	7.11	0.80

## Demo Board MCL P/N: TB-361 Suggested PCB Layout (PL-229)



### NOTE:

- 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.
  - 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

## Features

- low insertion loss 0.7 dB typ.
- good isolation, 25 dB typ.
- wide frequency band, 20 to 1200 MHz, usable 5-1300 MHz
- low amplitude unbalance, 0.1 dB typ.
- low phase unbalance, 0.5 deg. typ.

CASE STYLE: AH202

PRICE: \$ 9.95 ea. QTY (1-9)

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

The +Suffix has been added in order to identify RoHS  
Compliance. See our web site for RoHS Compliance  
methodologies and qualifications.

## Applications

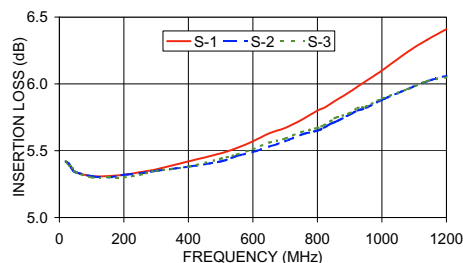
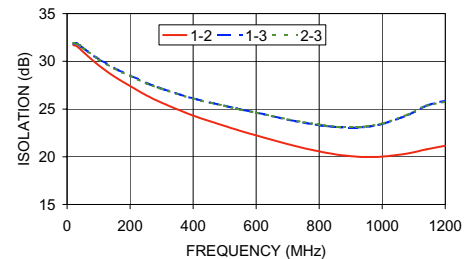
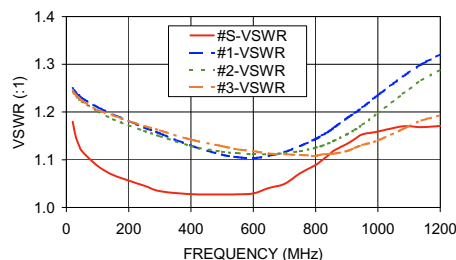
- CATV

## Splitter Electrical Specifications

FREQUENCY (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 4.8 dB		PHASE UNBALANCE (deg.)	AMPLITUDE UNBALANCE (dB)
	Typ.	Min.	Typ.	Max.	Max.	Max.
20-860	25	18	0.7	1.5	3	0.4
860-1200	20	17	1.2	2.2	5	0.8

## Typical Performance Data

FREQ. (MHz)	INSERTION LOSS (dB)			AMPLITUDE UNBALANCE (dB)	ISOLATION (dB)			PHASE UNBALANCE (deg.)	VSWR			
	S-1	S-2	S-3		1-2	1-3	2-3		S	1	2	3
20.00	5.42	5.42	5.42	0.01	31.70	31.86	31.88	0.11	1.18	1.25	1.24	1.25
50.00	5.34	5.34	5.34	0.00	31.00	31.40	31.37	0.04	1.12	1.23	1.22	1.22
100.00	5.31	5.31	5.30	0.01	29.59	30.25	30.23	0.12	1.09	1.21	1.20	1.20
200.00	5.32	5.32	5.30	0.02	27.42	28.52	28.48	0.23	1.06	1.18	1.17	1.18
300.00	5.36	5.35	5.35	0.02	25.66	27.13	27.11	0.22	1.03	1.16	1.15	1.16
400.00	5.42	5.38	5.38	0.04	24.31	26.11	26.09	0.36	1.03	1.13	1.13	1.14
500.00	5.48	5.42	5.44	0.06	23.23	25.33	25.33	0.27	1.03	1.11	1.12	1.13
600.00	5.57	5.49	5.51	0.07	22.24	24.62	24.63	0.34	1.03	1.10	1.11	1.12
700.00	5.67	5.57	5.59	0.10	21.32	23.89	23.93	0.23	1.05	1.12	1.11	1.11
800.00	5.80	5.65	5.67	0.14	20.56	23.31	23.36	0.17	1.09	1.14	1.13	1.11
900.00	5.94	5.77	5.78	0.17	20.07	23.04	23.12	0.12	1.13	1.19	1.15	1.12
1000.00	6.10	5.88	5.89	0.22	20.01	23.44	23.49	0.38	1.16	1.24	1.20	1.14
1080.00	6.24	5.96	5.96	0.28	20.34	24.35	24.41	0.72	1.17	1.27	1.24	1.16
1140.00	6.33	6.02	6.02	0.31	20.77	25.33	25.33	1.01	1.17	1.30	1.27	1.18
1200.00	6.41	6.06	6.05	0.36	21.16	25.88	25.76	1.60	1.17	1.32	1.29	1.19

SYPS-3-12W-75  
INSERTION LOSSSYPS-3-12W-75  
ISOLATIONSYPS-3-12W-75  
VSWR

## electrical schematic

