

Power Splitter/Combiner

SYPS-3-12W+

3 Way-0° 50Ω 20 to 1200 MHz



CASE STYLE: AH202

+RoHS Compliant

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

Maximum Ratings

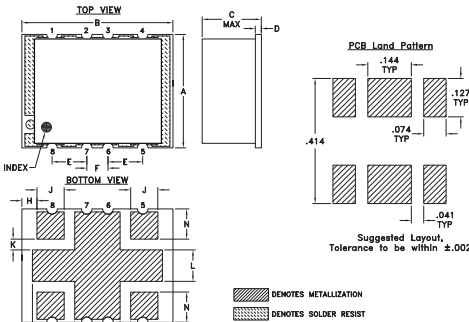
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.15W max.

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

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

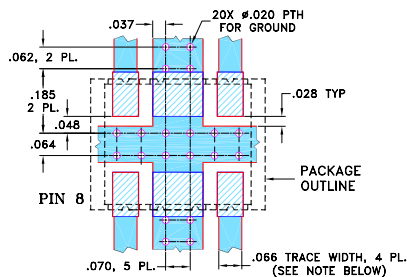
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	
.38	.50	.25	.020	.115	.070	.035	.050	
9.65	12.70	6.35	0.51	2.92	1.78	0.89	1.27	
J	K	L	M	N				wt
.090	.040	.105	.140	.095				grams
2.29	1.02	2.67	3.56	2.41				0.80

Demo Board MCL P/N: TB-364 Suggested PCB Layout (PL-231)



NOTES:

- TRACE WIDTH IS SHOWN FOR ROGERS R04350B 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

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

Features

- low insertion loss 1.0 dB typ.
- wide frequency band, 20 to 1200 MHz, usable 5 to 1250 MHz
- low amplitude unbalance, 0.1 dB typ.

Applications

- VHF/UHF CATV
- cellular

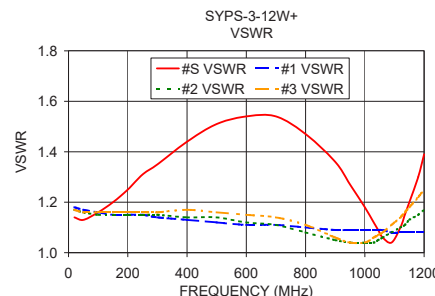
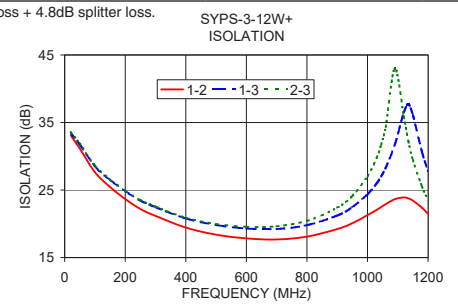
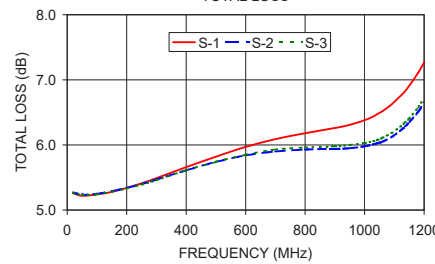
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 4.8 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
	Typ.	Min.	Typ.	Max.	Max.	Max.
f_L - f_U						
20-500	24	16	0.7	1.4	2.0	0.3
500-1000	20	15	1.2	2.0	4.0	0.7
1000-1200	24	16	1.7	2.9	6.0	0.9

Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)			Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3
	S-1	S-2	S-3		1-2	1-3	2-3					
20.00	5.26	5.27	5.26	0.01	33.11	33.43	33.56	0.08	1.14	1.18	1.17	1.17
50.00	5.22	5.24	5.23	0.01	31.13	31.72	31.88	0.10	1.13	1.17	1.16	1.16
100.00	5.24	5.25	5.24	0.01	27.63	28.50	28.60	0.18	1.16	1.16	1.15	1.16
200.00	5.34	5.34	5.33	0.01	23.67	24.84	24.91	0.32	1.25	1.15	1.15	1.16
300.00	5.49	5.47	5.46	0.03	21.17	22.46	22.54	0.44	1.35	1.14	1.15	1.16
400.00	5.66	5.61	5.61	0.05	19.44	20.80	20.90	0.52	1.44	1.13	1.14	1.17
500.00	5.82	5.74	5.74	0.09	18.40	19.82	19.98	0.56	1.51	1.12	1.14	1.16
600.00	5.97	5.84	5.85	0.13	17.84	19.31	19.56	0.52	1.54	1.11	1.12	1.15
700.00	6.09	5.90	5.93	0.18	17.68	19.24	19.63	0.40	1.54	1.11	1.11	1.14
800.00	6.18	5.93	5.96	0.25	18.11	19.80	20.45	0.19	1.47	1.10	1.08	1.11
900.00	6.26	5.94	5.98	0.32	19.22	21.23	22.40	0.19	1.36	1.09	1.05	1.06
1000.00	6.38	5.98	6.03	0.41	21.28	24.38	27.02	0.71	1.18	1.09	1.04	1.04
1090.00	6.62	6.12	6.18	0.50	23.65	31.70	42.96	1.40	1.04	1.08	1.08	1.11
1150.00	6.91	6.35	6.41	0.56	23.44	36.09	29.45	1.96	1.20	1.08	1.13	1.18
1200.00	7.27	6.65	6.72	0.62	21.47	27.81	23.54	2.56	1.39	1.08	1.17	1.25

1. Total Loss = Insertion Loss + 4.8dB splitter loss.



electrical schematic

