

Power Splitter/Combiner

HT-SYPS-3-12W+



3 Way-0° 50Ω 20 to 1200 MHz

Electrical Schematic

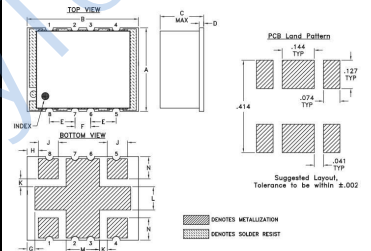


Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1 W max.
Internal Dissipation	0.15W max.
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

SUM PORT	8 (input)
PORT 1	1 (output1)
PORT 2	4 (output2)
PORT 3	5 (output3)
GROUND	2,3,6,7



Suggested Layout, Tolerance to be within ± 0.2

Outline Dimensions: Unit (mm)

A	9.65	J	2.29
B	12.70	K	1.02
C	4.80	L	2.67
D	0.51	M	3.56
E	2.92	N	2.41
F	1.78		
G	0.89		
H	1.27		
WT	0.80g		

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

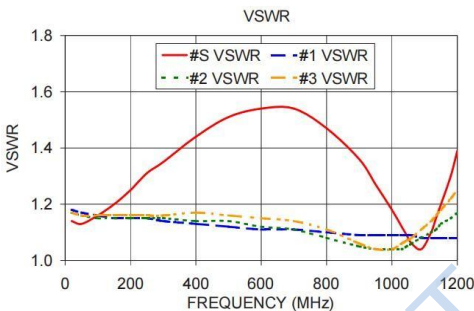
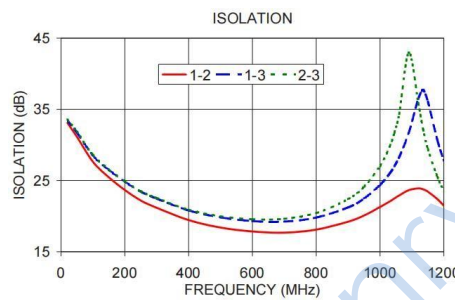
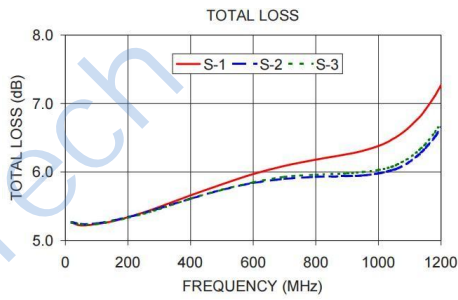
- VHF/UHF CATV
- cellular

Electrical Specifications

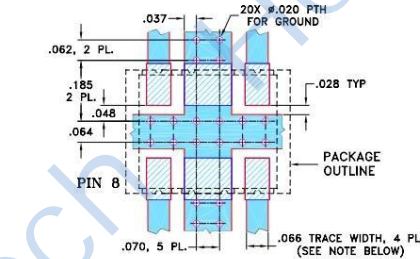
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 4.8 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
	Typ.	Min.	Typ.	Max.	Max.	Max.
20-500	24	16	0.7	1.4	2.0	0.3
500-1000	20	15	1.2	2.0	4.0	0.7
1000-1200	24	16	1.7	2.9	6.0	0.9

Typical Performance Data (TEST CONDITIONS: INPUT POWER = 0dBm @Temperature = +25°C)

Freq. (MHz)	Total Loss (dB)			Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWRS			
	S-1	S-2	S-3		1-2	2-3	3-4		S	1	2	3
20	5.26	5.27	5.26	0.01	33.11	33.53	33.56	0.08	1.14	1.18	1.17	1.17
50	2.22	5.24	5.23	0.01	31.12	31.82	31.98	0.10	1.13	1.17	1.16	1.16
100	5.24	5.25	5.24	0.01	27.65	28.60	28.70	0.18	1.16	1.16	1.15	1.16
200	5.34	5.34	5.33	0.01	23.67	24.94	24.95	0.32	1.25	1.15	1.15	1.16
300	5.49	5.47	5.46	0.03	21.17	22.54	22.64	0.44	1.35	1.14	1.15	1.16
400	5.66	5.61	5.61	0.05	19.50	20.90	20.95	0.52	1.44	1.13	1.14	1.17
500	5.82	5.74	5.74	0.09	18.40	19.92	19.99	0.56	1.51	1.12	1.14	1.16
600	5.97	5.84	5.85	0.13	17.84	19.41	19.66	0.52	1.54	1.11	1.12	1.15
700	6.09	5.90	5.93	0.18	17.68	19.34	19.73	0.40	1.54	1.11	1.11	1.14
800	6.18	5.93	5.96	0.25	18.12	19.90	20.55	0.19	1.47	1.10	1.08	1.11
900	6.26	5.94	5.98	0.32	19.23	21.33	22.50	0.19	1.36	1.09	1.05	1.06
1000	6.38	5.98	6.03	0.41	21.29	24.48	27.12	0.71	1.18	1.09	1.04	1.04
1090	6.70	6.12	6.18	0.50	23.75	31.80	42.98	1.40	1.04	1.08	1.08	1.11
1150	7.01	6.35	6.41	0.56	23.54	36.19	29.55	1.96	1.20	1.08	1.13	1.18
1200	7.50	6.65	6.72	0.62	21.47	28.91	23.64	2.56	1.39	1.08	1.17	1.25



Suggested PCB Layout



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