

SCA-4-10-75+  
SCA-4-10-75

10 to 1000 MHz



## Features

- wideband, 10-1000 MHz
- high isolation, 25 dB typ.
- good amplitude unbalance, 0.5 dB typ.
- patent pending

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

## Applications

- cellular
- UHF/VHF receivers/transmitters

## Splitter Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 6 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
	Typ.	Min.	Typ.	Max.	Max.	Max.
<b>10-1000</b>						
10-400	30	22	1.2	2.3	6	1.2
400-750	25	18	1.5	2.2	9	0.9
750-1000	20	15	2.0	2.5	10	0.9

### Typical Performance Data

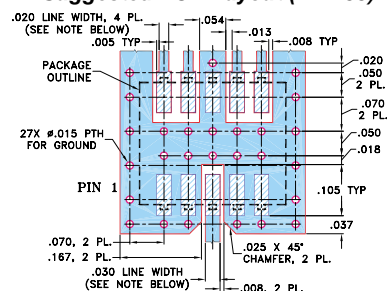
Freq. (MHz)	Insertion Loss (dB)				Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3	VSWR 4
	S-1	S-2	S-3	S-4		1-2	1-3	2-3						
10.00	7.21	6.78	7.13	7.53	0.74	34.55	47.68	47.34	1.86	1.11	1.61	1.48	1.51	1.64
50.00	7.12	6.75	7.07	7.43	0.68	55.90	49.10	48.97	0.85	1.05	1.52	1.42	1.46	1.57
100.00	7.16	6.77	7.10	7.48	0.71	54.20	51.26	50.69	0.94	1.14	1.51	1.43	1.46	1.55
200.00	7.22	6.87	7.17	7.53	0.66	40.79	65.07	60.68	1.45	1.28	1.50	1.44	1.45	1.52
300.00	7.28	6.95	7.24	7.56	0.61	33.63	48.42	44.66	2.13	1.41	1.48	1.45	1.44	1.49
400.00	7.30	7.01	7.27	7.56	0.55	28.11	38.54	36.47	2.40	1.49	1.46	1.46	1.43	1.45
500.00	7.35	7.03	7.31	7.59	0.56	24.85	34.71	32.80	2.83	1.50	1.42	1.44	1.41	1.41
600.00	7.37	7.02	7.32	7.60	0.58	22.50	32.13	30.41	2.98	1.48	1.38	1.40	1.38	1.36
650.00	7.39	7.04	7.35	7.63	0.59	21.50	30.85	29.23	3.11	1.48	1.36	1.39	1.36	1.34
700.00	7.46	7.11	7.40	7.67	0.56	20.63	30.04	28.44	3.53	1.49	1.34	1.37	1.34	1.33
750.00	7.50	7.14	7.43	7.70	0.56	19.98	29.78	28.11	3.53	1.51	1.32	1.34	1.33	1.31
800.00	7.54	7.15	7.45	7.75	0.59	19.37	29.15	27.66	3.59	1.53	1.31	1.32	1.31	1.30
900.00	7.64	7.26	7.54	7.82	0.56	18.17	28.23	26.83	4.14	1.55	1.28	1.27	1.29	1.29
950.00	7.73	7.31	7.60	7.88	0.57	17.63	27.54	26.25	4.30	1.56	1.27	1.25	1.26	1.29
1000.00	7.84	7.40	7.67	7.98	0.57	17.09	26.99	25.74	4.59	1.59	1.26	1.24	1.25	1.29

Suggested Layout,  
Tolerance to be within  $\pm .002$

A	B	C	D	E	F	G
.30	.250	.190	.262	.050	.050	.012
7.62	6.35	4.83	6.65	1.27	1.27	0.30


H	J	K	L	M	wt
.027	.004	.085	.296	.030	grams
0.69	0.10	2.16	7.52	0.76	0.5


**Demo Board MCL P/N: TB-247**  
**Suggested PCB Layout (PL-133)**

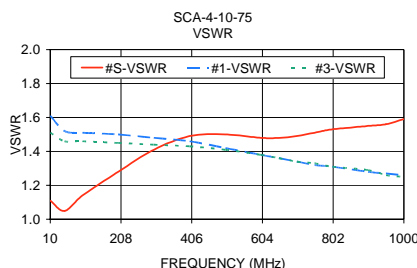
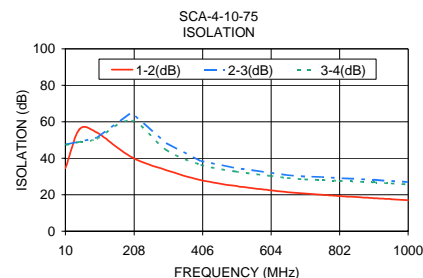
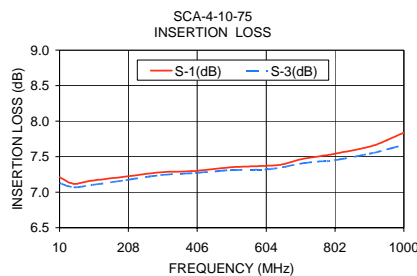


**NOTE:** 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS  $0.030" \pm 0.002"$ . COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

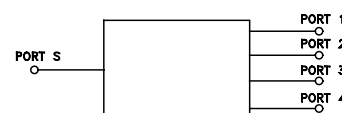
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

 DENOTES PCB COPPER LAYOUT

 DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK



electrical schematic



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