

Surface Mount

Power Splitter/Combiner

SCA-4-20+

4 Way-0° 50Ω 1000 to 2000 MHz

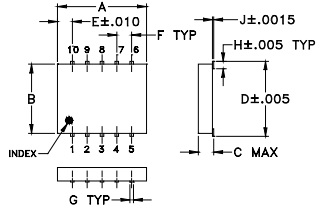
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	5W max.
Internal Dissipation	0.25W max.
Permanent damage may occur if any of these limits are exceeded.	

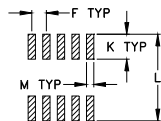
Pin Connections

SUM PORT	3
PORT 1	6
PORT 2	7
PORT 3	9
PORT 4	10
GROUND	1,2,4,5,8

Outline Drawing



PCB Land Pattern

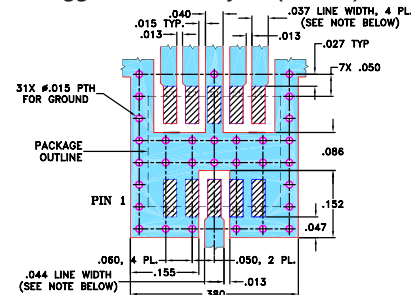


Suggested Layout,
Tolerance to be within ±0.02

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.30	.250	.052	.266	.050	.050	.012
7.62	6.35	1.32	6.76	1.27	1.27	0.30
H	J	K	L	M		wt
.029	.004	.085	.296	.030		grams
0.74	0.10	2.16	7.52	0.76		0.25

Demo Board MCL P/N: TB-241 Suggested PCB Layout (PL-125)



NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS 0.020" ± 0.0015". COPPER: 1/2 OZ. EACH SIDE.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

■ DENOTES PCB COPPER LAYOUT
■ DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

Notes

A. 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.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. 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

- wideband, 1000 to 2000 MHz
- high isolation, 20 dB typ.
- small surface mount package (0.25"x0.3")
- low profile (0.045")
- welded leads

Applications

- PCS
- GPS

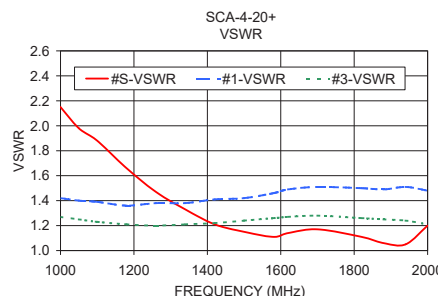
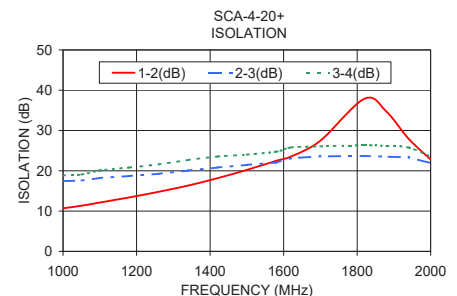
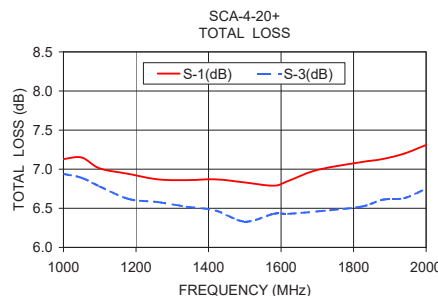
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 6.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
f_L - f_U	Typ.	Min.	Typ.	Max.	Max.	Max.
1000-2000	15	8	1.0	1.8	5	0.9
1500-1700	20	17	1.0	1.2	5	0.8
1700-2000	20	17	1.5	1.8	5	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	VSWR 4
	S-1	S-2	S-3	S-4		1-2	1-3	2-3						
1000.00	7.13	6.97	6.94	7.29	0.35	10.70	17.43	18.86	0.86	2.15	1.42	1.29	1.27	1.44
1050.00	7.15	6.96	6.89	7.25	0.36	11.34	17.57	19.08	0.31	1.98	1.40	1.27	1.25	1.41
1100.00	7.01	6.85	6.78	7.11	0.33	12.12	18.22	20.08	0.48	1.88	1.39	1.25	1.23	1.39
1180.00	6.94	6.73	6.62	7.00	0.38	13.40	18.71	20.81	0.93	1.66	1.36	1.25	1.21	1.37
1260.00	6.87	6.68	6.58	6.94	0.36	14.79	19.24	21.60	1.09	1.47	1.38	1.25	1.20	1.35
1340.00	6.86	6.63	6.52	6.92	0.39	16.34	20.06	22.68	0.82	1.33	1.38	1.25	1.21	1.36
1420.00	6.87	6.58	6.47	6.91	0.44	18.17	20.82	23.55	1.04	1.21	1.41	1.27	1.22	1.37
1500.00	6.83	6.44	6.33	6.84	0.51	20.24	21.46	24.01	0.89	1.15	1.42	1.29	1.24	1.38
1580.00	6.79	6.45	6.43	6.86	0.43	22.50	22.05	24.74	0.95	1.11	1.46	1.29	1.26	1.39
1620.00	6.85	6.49	6.43	6.88	0.45	23.56	23.13	25.80	1.38	1.14	1.49	1.31	1.27	1.42
1700.00	6.99	6.52	6.46	7.06	0.60	27.50	23.57	26.06	2.23	1.17	1.51	1.30	1.28	1.42
1820.00	7.09	6.56	6.52	7.14	0.62	37.89	23.68	26.33	1.50	1.11	1.50	1.28	1.26	1.42
1880.00	7.13	6.61	6.61	7.23	0.62	34.66	23.52	26.14	2.04	1.06	1.49	1.27	1.25	1.42
1940.00	7.20	6.67	6.63	7.27	0.64	27.96	23.34	25.78	1.94	1.05	1.51	1.24	1.24	1.42
2000.00	7.31	6.76	6.75	7.38	0.63	22.79	21.89	23.53	1.31	1.20	1.48	1.21	1.21	1.41

1. Total Loss = Insertion Loss + 6dB splitter loss.



electrical schematic



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