

Surface Mount

Power Splitter/Combiner

WP4L+

4 Way-0° 50Ω 2700 to 3800 MHz

Maximum Ratings

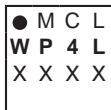
Operating Temperature	-40°C to 85°C
Storage Temperature	-65°C to 150°C
Power Input (as a splitter)	1.5W max.
Internal Dissipation	0.375W max.

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

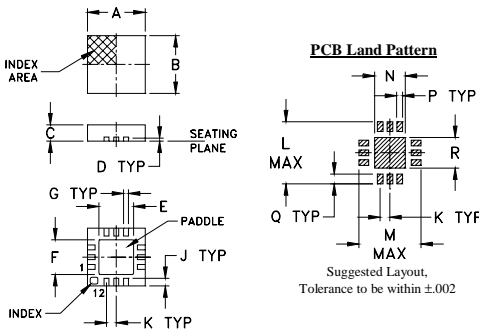
Pad Connections

SUM PORT	2
PORT 1	12
PORT 2	10
PORT 3	6
PORT 4	4
GROUND	1,3,5,7,8,9,11, paddle

Product Marking



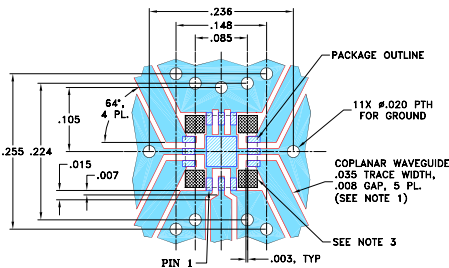
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J
.118	.118	.035	.008	.057	.057	.009	---	.016
3.00	3.00	0.89	0.20	1.45	1.45	0.23	---	0.41
K	L	M	N	P	Q	R		wt
.020	.127	.127	.049	.010	.020	.049		grams
0.51	3.23	3.23	1.24	0.25	0.51	1.24		0.02

Demo Board MCL P/N: TB-395+ Suggested PCB Layout (PL-259)



NOTES:

- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP MAY NEED TO BE MODIFIED.
 - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
 - SIGNAL TRACES ARE NOT ALLOWED INSIDE HATCHED AREAS (APPROX. .030" X .030") AT 4 PLACES AS SHOWN.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- excellent isolation, 24 dB typ.
- good phase unbalance 3 deg. typ.
- good amplitude unbalance, 0.2 dB typ.
- small size, .118" x .118" x .035"
- high ESD level
- aqueous washable

Applications

- WLAN
- WIMAX
- WCDMA
- radar

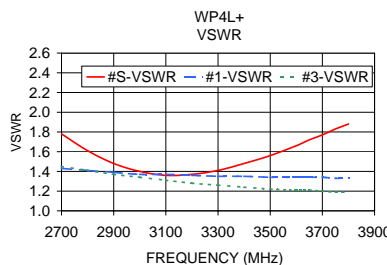
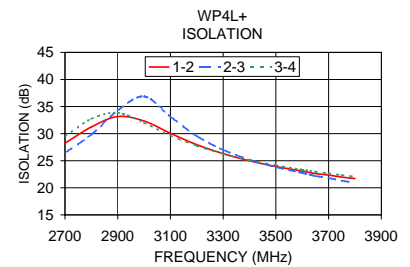
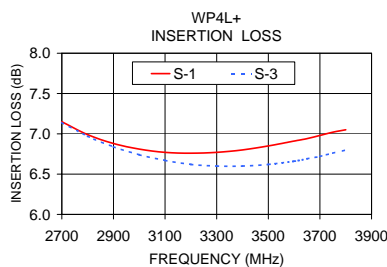
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS* (dB) ABOVE 6.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1) Typ.	
	Typ.	Min.	Typ.	Max.			Port S	Ports 1,2,3,4
2700-3800	24	16	0.7	2.1	9	0.5	1.6	1.35

* Includes fixture loss, 0.2 dB typ.

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	2-3	3-4						
2700.00	7.15	7.19	7.14	7.10	0.09	28.23	26.45	29.48	0.92	1.78	1.43	1.46	1.45	1.40
2800.00	6.99	7.02	6.97	6.95	0.07	31.23	29.82	32.73	0.59	1.61	1.41	1.42	1.41	1.37
2900.00	6.88	6.89	6.84	6.83	0.06	33.16	34.26	33.85	0.86	1.48	1.39	1.39	1.37	1.35
3000.00	6.81	6.79	6.74	6.76	0.07	32.33	36.86	32.00	1.42	1.40	1.37	1.36	1.34	1.34
3100.00	6.77	6.73	6.67	6.72	0.10	30.06	33.15	29.66	1.97	1.36	1.37	1.34	1.31	1.33
3200.00	6.76	6.68	6.62	6.71	0.14	27.97	29.55	27.76	2.46	1.37	1.36	1.30	1.28	1.32
3300.00	6.77	6.66	6.60	6.72	0.17	26.30	27.01	26.28	2.93	1.41	1.35	1.28	1.26	1.31
3400.00	6.80	6.65	6.60	6.75	0.20	24.98	25.20	25.10	3.35	1.48	1.35	1.25	1.24	1.31
3500.00	6.85	6.67	6.62	6.80	0.23	23.93	23.83	24.15	3.74	1.56	1.34	1.24	1.22	1.30
3550.00	6.88	6.69	6.64	6.83	0.24	23.45	23.23	23.73	3.94	1.62	1.35	1.25	1.22	1.31
3600.00	6.91	6.71	6.66	6.86	0.25	23.09	22.75	23.35	4.10	1.66	1.34	1.23	1.21	1.30
3650.00	6.94	6.74	6.69	6.90	0.25	22.63	22.18	22.99	4.29	1.72	1.34	1.22	1.21	1.30
3700.00	6.98	6.77	6.72	6.93	0.26	22.35	21.79	22.66	4.45	1.77	1.34	1.23	1.20	1.30
3750.00	7.02	6.81	6.76	6.97	0.26	21.97	21.31	22.35	4.60	1.83	1.33	1.21	1.19	1.30
3800.00	7.05	6.84	6.80	7.01	0.25	21.71	20.93	22.06	4.76	1.88	1.33	1.22	1.19	1.30



electrical schematic



ESD Rating

Human Body Model (HBM): Class 1A (250v to < 500v) in accordance with ANSI/ESD STM 5.1 - 2001
Machine Model (MM): Class M2 (100V to < 250V) in accordance with ANSI/ESD STM 5.2 - 1999

Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shipping online see web site

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IF/RF MICROWAVE COMPONENTS

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