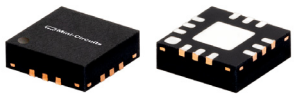
MMIC SURFACE MOUNT

Power Splitter/Combiner WP4G1+

4 Way-0° 50Ω 1300 to 2000 MHz

FEATURES

- Excellent isolation, 26 dB typ.
- Excellent phase unbalance 1 deg. typ.
- Excellent amplitude unbalance, 0.25 dB typ.
- Small size, .118" x .118" x .035"
- High ESD level
- Aqueous washable



Generic photo used for illustration purposes only

CASE STYLE: DQ1225

+RoHS Compliant
The +Suffix identifies RoHS Compliance.
See our website for methodologies and qualifications

APPLICATIONS

- GPS
- PCS
- DCS
- WCDMA

ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Frequency Range		1300		2000	MHz
Insertion Loss* (above 6.0 dB)	1300-2000	—	0.8	1.9	dB
Isolation	1300-2000	14	26	—	dB
Amplitude Unbalance	1300-2000	—	—	0.5	dB
Phase Unbalance	1300-2000	—	—	5	deg.
VSWR (Port S)	1300-2000	—	1.5	—	:1
VSWR (Ports 1,2,3,4)	1300-2000	—	1.4	—	:1

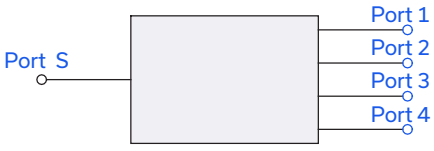
* Includes fixture loss, 0.12 dB typ.

MAXIMUM RATINGS

Parameter	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.

ELECTRICAL SCHEMATIC



REV. D
ECO-015507
WP4G1+
MCL NY
221025

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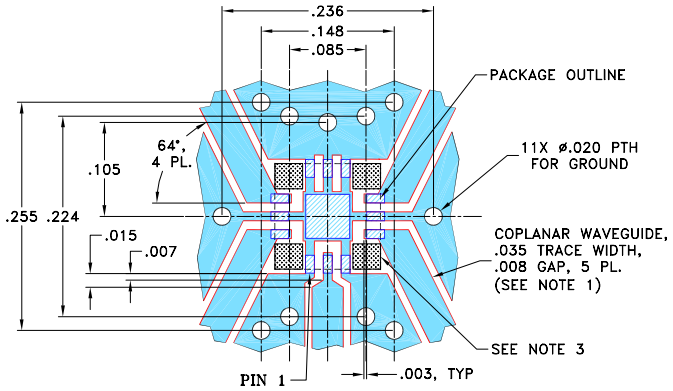
PAD CONNECTIONS

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

DEMO BOARD MCL P/N: TB-395+
SUGGESTED PCB LAYOUT (PL-259)

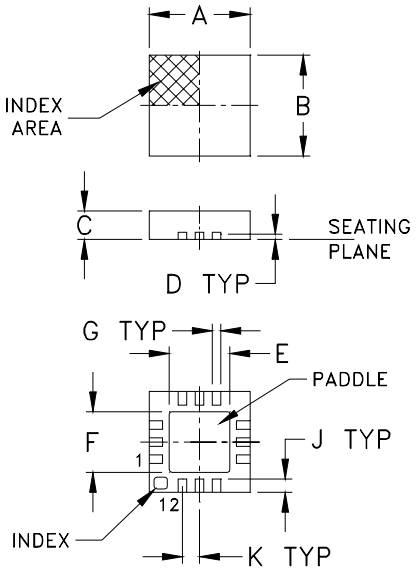


NOTES:
1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
3. SIGNAL TRACES ARE NOT ALLOWED INSIDE HATCHED AREAS (APPROX.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

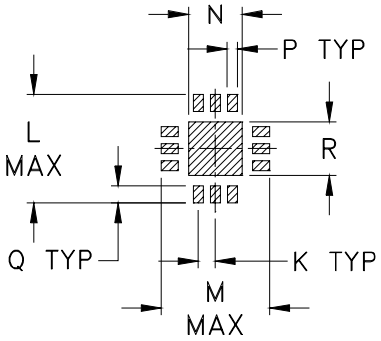
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

OUTLINE DRAWING

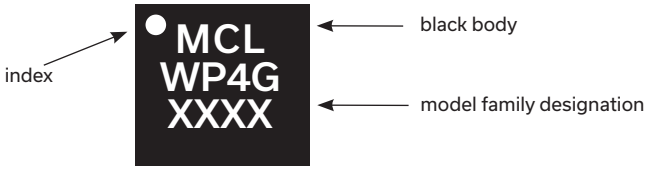


PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

PRODUCT MARKING



Marking may contain other features or characters for internal lot control

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

TAPE & REEL INFORMATION: F66

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TYPICAL PERFORMANCE DATA AND CHARTS

Frequency (MHz)	Total Loss[1] (dB)				Amplitude Unbalance (dB)	Isolation (dB)			Phase Unbalance (deg.)	VSWR				
	S-1	S-2	S-3	S-4		1-2	2-3	3-4		S	1	2	3	4
1300.00	7.18	7.31	7.24	7.11	0.20	26.81	23.73	27.28	1.41	1.79	1.58	1.55	1.53	1.54
1360.00	6.94	7.05	6.98	6.86	0.19	30.94	26.53	31.87	1.19	1.53	1.54	1.51	1.49	1.50
1400.00	6.82	6.93	6.86	6.75	0.18	33.52	28.41	34.73	1.03	1.39	1.52	1.48	1.46	1.48
1450.00	6.72	6.82	6.75	6.65	0.17	33.24	29.81	33.68	0.88	1.25	1.49	1.45	1.43	1.45
1500.00	6.66	6.75	6.68	6.59	0.16	30.25	29.21	30.14	0.87	1.16	1.47	1.43	1.41	1.43
1550.00	6.63	6.71	6.64	6.56	0.15	27.52	27.41	27.30	0.92	1.15	1.45	1.41	1.39	1.41
1570.00	6.63	6.70	6.63	6.55	0.15	26.62	26.63	26.39	0.92	1.17	1.45	1.40	1.38	1.41
1580.00	6.63	6.70	6.63	6.55	0.14	26.21	26.25	25.97	0.93	1.18	1.44	1.39	1.37	1.41
1590.00	6.62	6.69	6.62	6.55	0.14	25.82	25.89	25.57	0.93	1.20	1.44	1.39	1.37	1.40
1600.00	6.63	6.69	6.62	6.55	0.14	25.45	25.52	25.20	0.95	1.21	1.44	1.39	1.36	1.40
1650.00	6.64	6.70	6.63	6.57	0.13	23.85	23.90	23.60	1.14	1.29	1.43	1.37	1.35	1.39
1700.00	6.67	6.71	6.65	6.60	0.12	22.59	22.54	22.35	1.36	1.38	1.43	1.36	1.34	1.39
1800.00	6.75	6.77	6.71	6.68	0.09	20.73	20.47	20.50	1.73	1.57	1.42	1.35	1.33	1.39
1900.00	6.85	6.85	6.79	6.78	0.07	19.44	18.96	19.22	2.09	1.74	1.43	1.35	1.32	1.39
2000.00	6.95	6.94	6.87	6.89	0.08	18.50	17.82	18.27	2.40	1.90	1.44	1.35	1.33	1.40

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