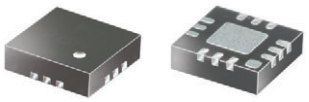
Surface Mount

Power Splitter/Combiner

WP4U+

4 Way-0° 50Ω 2100 to 2500 MHz



CASE STYLE: DQ1225
PRICE: $1.49 ea. QTY. (25)

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

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

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

Features

- excellent isolation, 28 dB typ.
- excellent phase unbalance, 1 deg. typ.
- excellent amplitude unbalance, 0.2 dB typ.
- small size, .118" x .118" x .035"
- high ESD level
- aqueous washable

Applications

- WLAN
- WIMAX
- MMDS
- ISM

Electrical Specifications

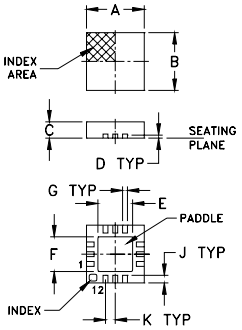
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS* (dB) ABOVE 6.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1) Typ.	
							Port S	Ports 1,2,3,4
f_L-f_U	Typ.	Min.	Typ.	Max.	Max.	Max.		
2100-2500	28	18	0.7	1.4	4	0.5	1.3	1.35

*Includes test fixture loss, 0.2 dB typ.

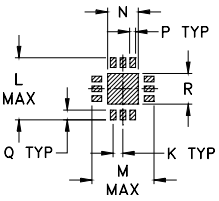
Typical Performance Data

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						
2100.00	6.77	6.90	6.85	6.68	0.22	33.80	28.32	33.13	0.78	1.29	1.43	1.37	1.36	1.42
2125.00	6.75	6.87	6.82	6.66	0.22	32.29	28.49	31.88	0.72	1.26	1.43	1.36	1.35	1.41
2150.00	6.73	6.85	6.80	6.64	0.22	30.92	28.44	30.66	0.63	1.24	1.42	1.35	1.35	1.41
2200.00	6.69	6.81	6.75	6.60	0.20	28.63	27.83	28.51	0.45	1.22	1.41	1.34	1.32	1.40
2225.00	6.69	6.79	6.74	6.59	0.20	27.70	27.35	27.60	0.40	1.21	1.40	1.33	1.31	1.39
2250.00	6.68	6.78	6.72	6.59	0.20	26.86	26.82	26.79	0.40	1.22	1.40	1.32	1.31	1.39
2300.00	6.67	6.77	6.71	6.59	0.18	25.46	25.71	25.41	0.40	1.25	1.39	1.31	1.29	1.38
2325.00	6.67	6.76	6.70	6.58	0.18	24.87	25.17	24.81	0.47	1.27	1.39	1.30	1.28	1.37
2350.00	6.67	6.76	6.70	6.59	0.17	24.34	24.65	24.27	0.56	1.29	1.39	1.30	1.28	1.37
2375.00	6.68	6.76	6.71	6.60	0.17	23.85	24.16	23.79	0.65	1.32	1.38	1.29	1.27	1.37
2400.00	6.68	6.76	6.71	6.60	0.16	23.41	23.70	23.35	0.73	1.35	1.38	1.28	1.27	1.37
2425.00	6.69	6.77	6.71	6.62	0.15	23.00	23.25	22.94	0.81	1.37	1.38	1.28	1.26	1.37
2450.00	6.70	6.78	6.72	6.63	0.15	22.63	22.84	22.57	0.90	1.40	1.38	1.28	1.26	1.37
2475.00	6.71	6.78	6.73	6.64	0.14	22.29	22.46	22.23	0.98	1.43	1.38	1.27	1.25	1.37
2500.00	6.72	6.79	6.74	6.66	0.14	21.98	22.10	21.92	1.05	1.47	1.38	1.27	1.25	1.37

Outline Drawing



PCB Land Pattern



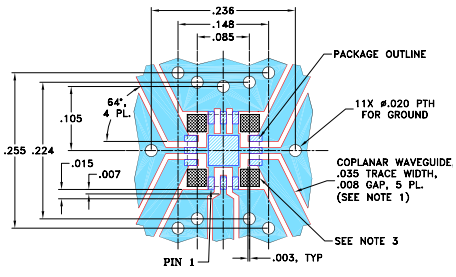
Suggested Layout,
Tolerance to be within ±.002

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

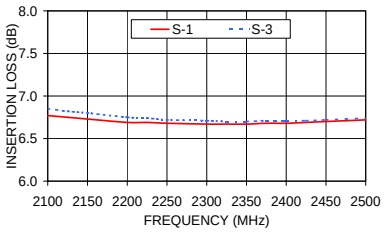
Demo Board MCL P/N: TB-395+
Suggested PCB Layout (PL-259)



NOTES:
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

WP4U+
INSERTION LOSS



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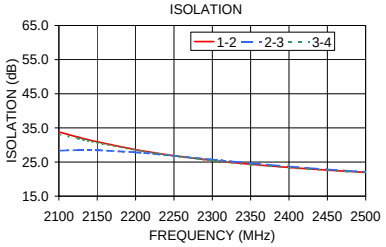
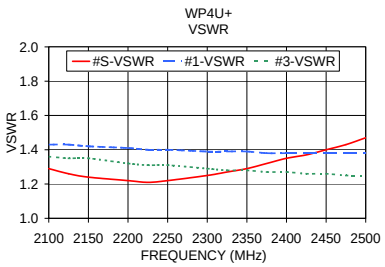
ISOLATION



WP4U+
VSWR



electrical schematic

ESD Rating
Human Body Model (HBM): Class 1A (250 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

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