

MMIC Surface Mount Power Splitter/Combiner

WP4U+

4 Way-0° 50Ω 2100 to 2500 MHz



CASE STYLE: DQ1225

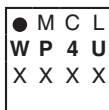
Maximum Ratings

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.	

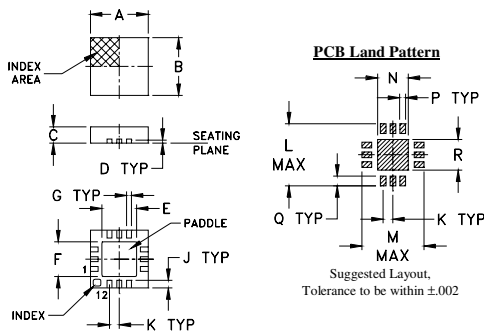
Pad Connections

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



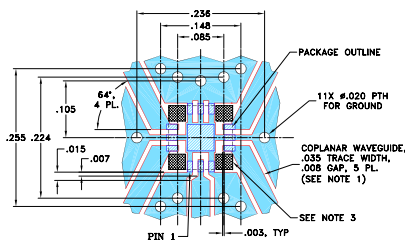
Outline Drawing



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

Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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/WCLStore/terms.jsp

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
- MMDS
- WIMAX
- ISM

Electrical Specifications

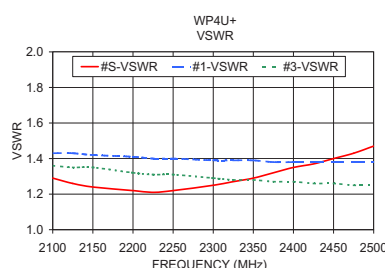
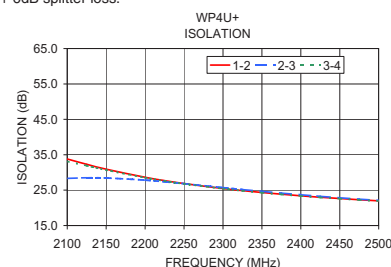
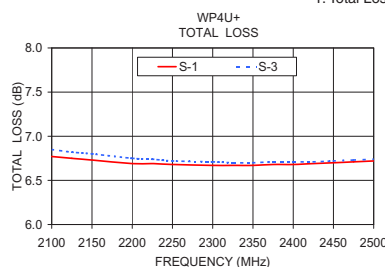
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS* (dB) ABOVE 6.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1) Typ.	
	Typ.	Min.	Typ.	Max.			Port S	Ports 1,2,3,4
2100-2500	28	18	0.7	1.4	4	0.5	1.3	1.35

*Includes test fixture loss, 0.2 dB typ.

Typical Performance Data

Freq. (MHz)	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	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

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



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

