

MMIC Surface Mount Power Splitter/Combiner

WP4P+

4 Way-0° 50Ω 1710 to 2025 MHz



Generic photo used for illustration purposes only
CASE STYLE: DQ1225

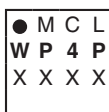
Maximum Ratings

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.	

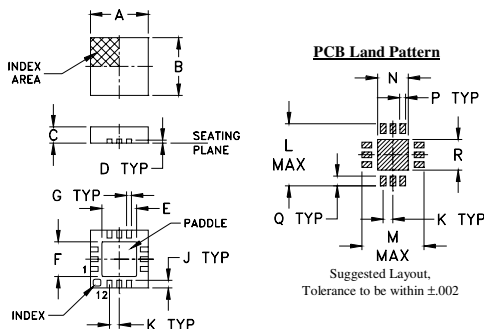
Pad Connections

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



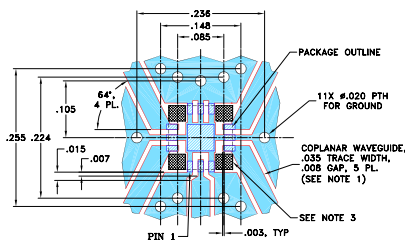
Outline Drawing



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, 29 dB typ.
- excellent phase unbalance, 0.5 deg. typ.
- excellent amplitude unbalance, 0.15 dB typ.
- small size, .118" x .118" x .035"
- high ESD level
- aqueous washable

Applications

- PCS
- WCDMA
- DCS

Electrical Specifications

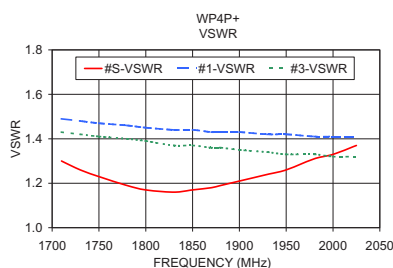
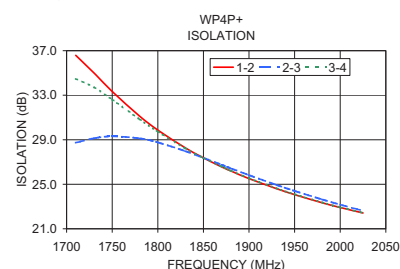
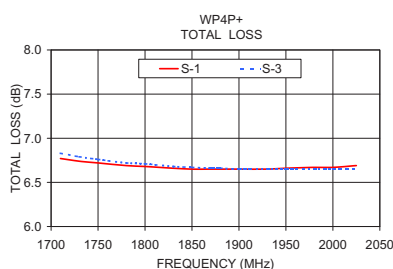
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS* (dB) ABOVE 6.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1) Typ.	
	Typ.	Min.	Typ.	Max.			Port S	Ports 1,2,3,4
1710-2025	29	19	0.7	1.4	4.0	0.4	1.3	1.4

*Includes fixture loss, 0.16 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						
1710.00	6.77	6.88	6.83	6.73	0.15	36.58	28.73	34.47	0.62	1.30	1.49	1.42	1.43	1.45
1730.00	6.74	6.85	6.79	6.70	0.14	35.00	29.13	33.71	0.54	1.26	1.48	1.41	1.42	1.44
1750.00	6.72	6.82	6.76	6.68	0.14	33.34	29.30	32.61	0.45	1.23	1.47	1.40	1.41	1.43
1780.00	6.69	6.78	6.72	6.64	0.13	31.12	29.12	30.84	0.32	1.19	1.46	1.38	1.40	1.42
1800.00	6.68	6.76	6.71	6.63	0.13	29.87	28.76	29.73	0.25	1.17	1.45	1.37	1.39	1.41
1830.00	6.66	6.73	6.68	6.61	0.12	28.28	27.98	28.24	0.19	1.16	1.44	1.36	1.37	1.40
1850.00	6.65	6.72	6.67	6.61	0.12	27.37	27.37	27.37	0.22	1.17	1.44	1.35	1.37	1.40
1870.00	6.65	6.71	6.66	6.60	0.11	26.56	26.75	26.59	0.27	1.18	1.43	1.35	1.36	1.39
1880.00	6.65	6.71	6.66	6.60	0.11	26.20	26.43	26.22	0.32	1.19	1.43	1.34	1.36	1.39
1900.00	6.65	6.70	6.65	6.59	0.11	25.51	25.82	25.54	0.40	1.21	1.43	1.34	1.35	1.38
1930.00	6.65	6.69	6.65	6.60	0.10	24.61	24.94	24.64	0.50	1.24	1.42	1.33	1.34	1.38
1950.00	6.66	6.69	6.65	6.60	0.09	24.07	24.40	24.10	0.57	1.26	1.42	1.32	1.33	1.38
1980.00	6.67	6.69	6.65	6.61	0.09	23.34	23.64	23.37	0.67	1.31	1.41	1.31	1.33	1.37
2000.00	6.67	6.69	6.65	6.61	0.08	22.91	23.17	22.93	0.71	1.33	1.41	1.31	1.32	1.37
2025.00	6.69	6.70	6.65	6.62	0.08	22.42	22.62	22.43	0.81	1.37	1.41	1.30	1.32	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

