

Power Splitter/Combiner

4 Way-0° 50Ω 5150 to 5875 MHz

WP4F+



CASE STYLE: DQ1225

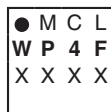
Maximum Ratings

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.	

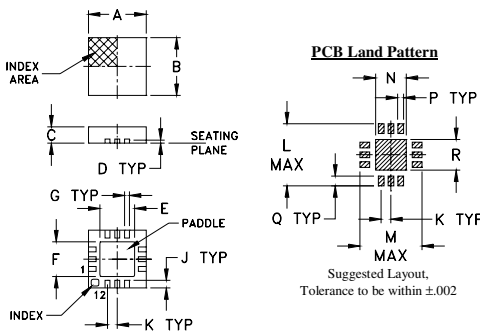
Pad Connections

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

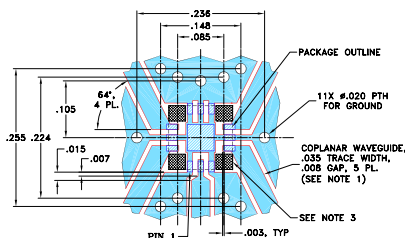


Outline Drawing



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/MCLStore/terms.jsp

Features

- excellent isolation, 29 dB typ.
- good phase unbalance 1.5 deg. typ.
- good amplitude unbalance, 0.15 dB typ.
- small size, .118" x .118" x .035"
- high ESD level
- aqueous washable

Applications

- WLAN
- WIMAX
- ISM
- radar

Electrical Specifications

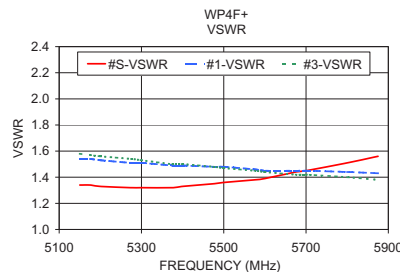
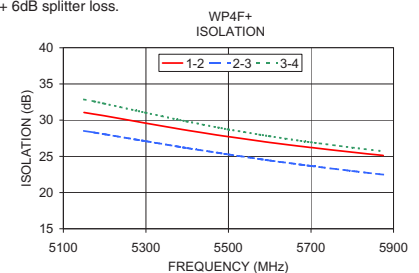
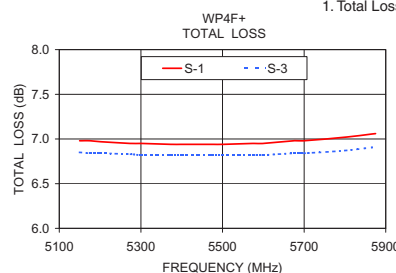
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS* (dB) ABOVE 6.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1) Typ.	
f _L -f _U	Typ.	Min.	Typ.	Max.	Max.	Max.	Port S	Ports 1,2,3,4
5150-5875	29	18	1.0	1.8	7	0.5	1.35	1.5

* Includes test fixture loss, 0.3 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						
5150.00	6.98	6.86	6.85	6.96	0.13	31.06	28.52	32.87	1.87	1.34	1.54	1.55	1.58	1.51
5175.00	6.98	6.85	6.84	6.95	0.13	30.83	28.29	32.58	1.89	1.34	1.54	1.54	1.57	1.51
5200.00	6.97	6.84	6.84	6.95	0.13	30.60	28.05	32.28	1.90	1.33	1.53	1.54	1.56	1.50
5275.00	6.95	6.82	6.83	6.93	0.13	29.84	27.33	31.34	1.94	1.32	1.51	1.51	1.54	1.49
5300.00	6.95	6.82	6.82	6.92	0.13	29.58	27.09	31.02	1.95	1.32	1.51	1.51	1.53	1.48
5375.00	6.94	6.81	6.82	6.91	0.13	28.84	26.38	30.10	1.95	1.32	1.49	1.48	1.50	1.47
5400.00	6.94	6.81	6.82	6.92	0.13	28.60	26.14	29.82	1.98	1.33	1.49	1.48	1.50	1.47
5475.00	6.94	6.81	6.82	6.91	0.13	27.93	25.49	28.98	2.02	1.35	1.48	1.46	1.48	1.45
5500.00	6.94	6.81	6.82	6.92	0.13	27.72	25.26	28.72	2.02	1.36	1.48	1.45	1.47	1.46
5575.00	6.95	6.82	6.82	6.93	0.13	27.12	24.63	28.00	2.08	1.38	1.46	1.43	1.45	1.44
5600.00	6.95	6.83	6.82	6.93	0.13	26.92	24.43	27.78	2.10	1.39	1.45	1.43	1.44	1.44
5675.00	6.98	6.85	6.84	6.95	0.14	26.39	23.86	27.14	2.15	1.44	1.45	1.41	1.42	1.43
5700.00	6.98	6.86	6.84	6.96	0.14	26.22	23.67	26.95	2.21	1.45	1.45	1.40	1.42	1.42
5800.00	7.02	6.89	6.87	6.99	0.15	25.57	22.98	26.21	2.45	1.51	1.44	1.38	1.40	1.41
5875.00	7.06	6.93	6.91	7.04	0.15	25.12	22.48	25.71	2.61	1.56	1.43	1.37	1.38	1.42

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



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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Rev. C
MP4-ED12616A7_17
WP4F+
RS/CP/OL
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