



Mini-Circuits

MMIC SURFACE MOUNT

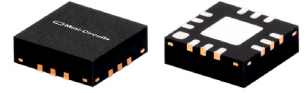
Power Splitter/Combiner

WP4P+

4 Way-0° 50Ω 1710 to 2025 MHz

FEATURES

- Excellent Isolation, Typ. 29 dB
- Excellent Phase Unbalance, Max. 4 deg.
- Excellent Amplitude Unbalance, Max. 0.4 dB
- Small Size, 3x3 mm
- High ESD Level
- Aqueous Washable



Generic photo used for illustration purposes only

CASE STYLE: DQ1225

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

APPLICATIONS

- PCS
- WCDMA
- DCS

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Frequency Range		1710		2025	MHz
Insertion Loss* (Above 6.0 dB)	1710-2025		0.7	1.4	dB
Isolation	1710-2025	19	29		dB
Amplitude Unbalance	1710-2025			0.4	dB
Phase Unbalance	1710-2025			4.0	deg.
VSWR (Port S)	1710-2025		1.3		:1
VSWR (Ports 1,2,3,4)	1710-2025		1.4		:1

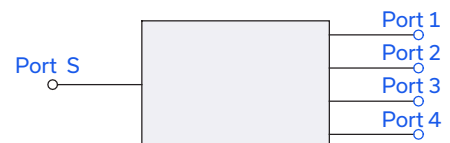
*Includes fixture loss, 0.16 dB typ.

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-40°C to +85°C
Storage Temperature	-65°C to +150°C
Power Input (as a Splitter)	1.5 W max.
Internal Dissipation	0.375 W max.

Permanent damage may occur if any of these limits are exceeded.

ELECTRICAL SCHEMATIC



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REV. E
ECO-026468
WP4P+
MCL NY
250806

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OUTLINE DRAWING

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

[illegible]

1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B 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.

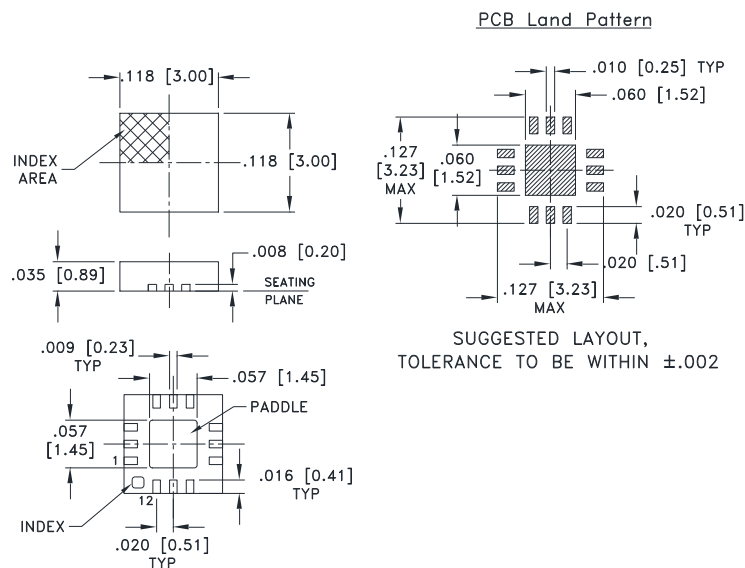
-  DENOTES PCB COPPER LAYOUT WITH SMOBC
 (SOLDER MASK OVER BARE COPPER)
 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Diagram illustrating the components of a model label:

- Index**: Points to the white circle (●) preceding the text.
- Black Body**: Points to the black rectangular background.
- Model Family Designation**: Points to the text "MCL WP4P XXXX".

Marking may contain other features or characters for internal lot control.

OUTLINE DRAWING



Weight: .02 Grams
Dimensions are in inches [mm]. Tolerances in inches: 2 Pl. $\pm .01$; 3 Pl. $\pm .004$ inches

TAPE & REEL INFORMATION: F66



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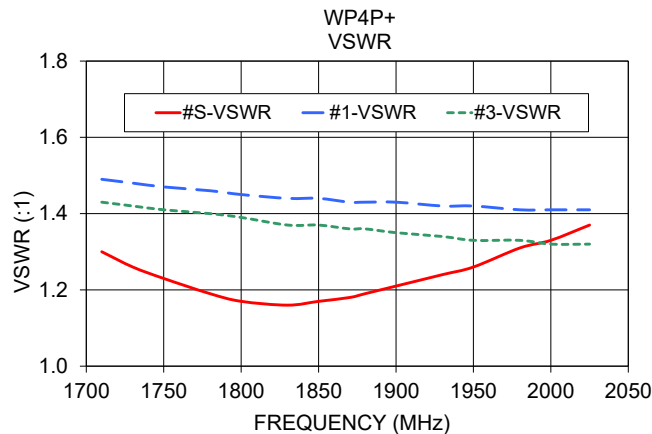
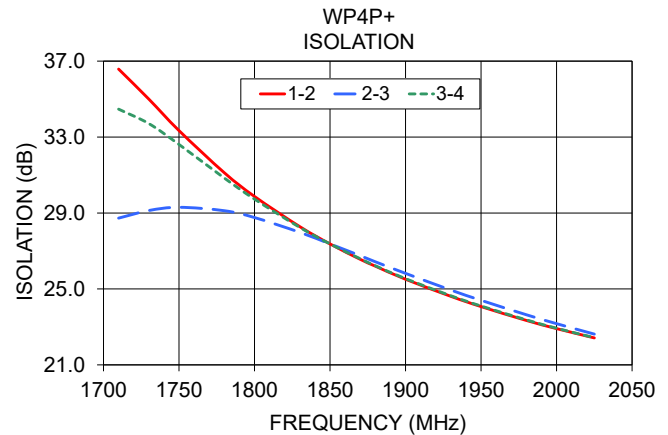
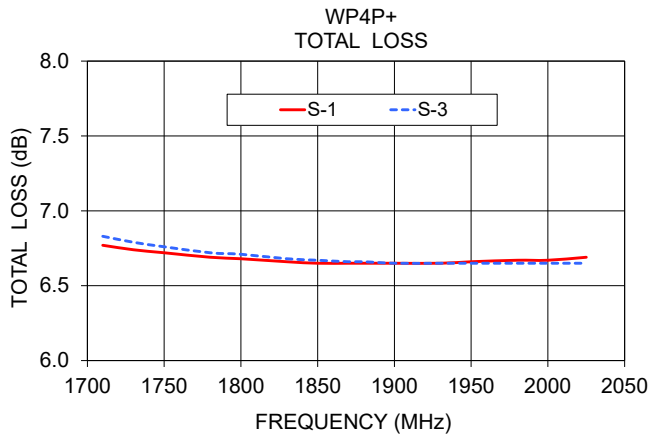
WP4P+

4 Way-0° 50Ω 1710 to 2025 MHz

TYPICAL PERFORMANCE DATA AND CHARTS

Frequency (MHz)	Total Loss ¹ (dB)				Amplitude Unbalance (dB)	Isolation (dB)			Phase Unbalance (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 + 6 dB splitter loss.



NOTES

- A. 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.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits 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-Circuits' website at www.minicircuits.com/terms/viewterm.html

