



Mini-Circuits

MMIC SURFACE MOUNT

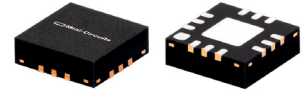
Power Splitter/Combiner

GP2X1+

2 Way-0° 50Ω 2800 to 7200 MHz

FEATURES

- Very Wide Bandwidth, 2800 to 7200 MHz
- Excellent Amplitude Unbalance, Typ. 0.04 dB
- Good Phase Unbalance, Typ. 4.5 deg.
- Small Size, 0.118" x 0.118" x 0.035"
- High ESD Level
- Aqueous Washable



Generic photo used for illustration purposes only

CASE STYLE: DQ1225

+RoHS Compliant

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

APPLICATIONS

- WLAN
- Radar
- Satellite Communication
- ISM
- Instrumentation

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Frequency Range		2800		7200	MHz
Insertion Loss* (Above 3.0 dB)	2800-7200		0.6	1.9	dB
Isolation	2800-7200	10	22		dB
Amplitude Unbalance	2800-7200		0.1	0.4	dB
Phase Unbalance	2800-7200		4.5	10	deg.
VSWR (Port S)	2800-7200		1.3		:1
VSWR (Ports 1,2)	2800-7200		1.2		

* De-embedded from demo board loss.

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	0.75 W max.

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

ELECTRICAL SCHEMATIC

REV. E
ECO-025003
GP2X1+
MCL NY
250523

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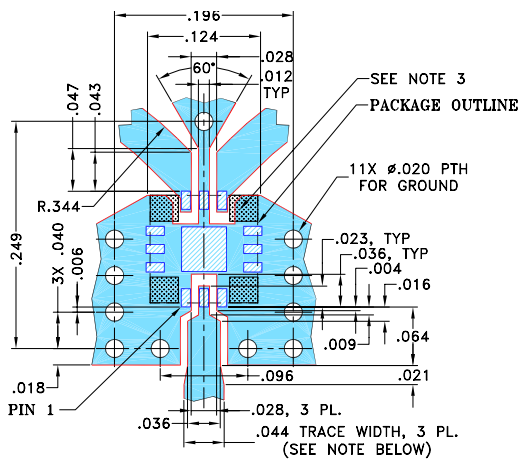
GP2X1+

2 Way-0° 50Ω 2800 to 7200 MHz

PAD CONNECTIONS

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

DEMO BOARD MCL P/N: TB-453-GPX1+
SUGGESTED PCB LAYOUT (PL-282)

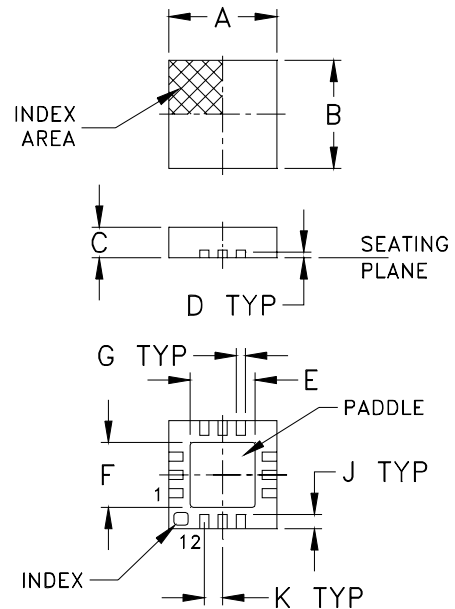


NOTES:

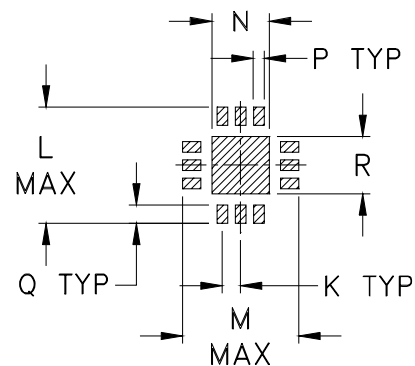
1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
3. SIGNAL TRACES ARE NOT ALLOWED INSIDE HATCHED AREAS (APPROX. .030 X .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

OUTLINE DRAWING

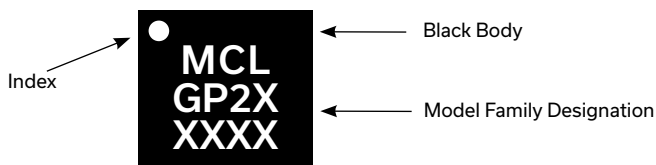


PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

PRODUCT MARKING



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

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	

TAPE & REEL INFORMATION: F66

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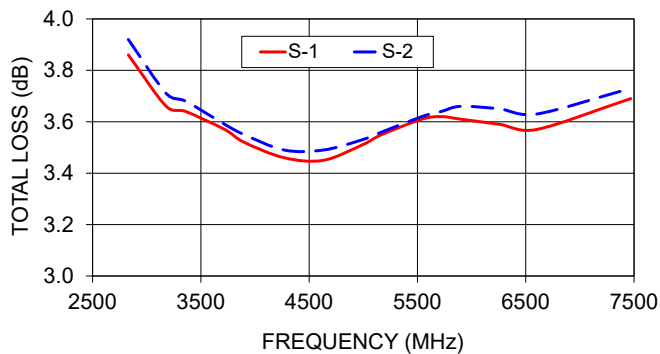
2 Way-0° 50Ω 2800 to 7200 MHz

TYPICAL PERFORMANCE DATA AND CHARTS

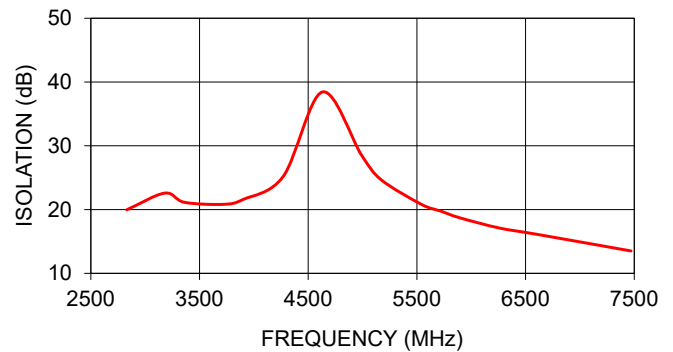
Frequency (MHz)	Total Loss ¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
2830	3.86	3.92	0.06	19.96	2.37	1.20	1.17	1.13
3180	3.66	3.71	0.05	22.58	2.72	1.23	1.14	1.12
3360	3.64	3.68	0.04	21.14	2.92	1.33	1.16	1.13
3720	3.57	3.59	0.03	20.82	3.20	1.34	1.14	1.08
3900	3.52	3.55	0.02	21.57	3.30	1.28	1.12	1.04
4270	3.46	3.49	0.04	25.19	3.58	1.12	1.05	1.06
4630	3.45	3.49	0.04	38.44	3.97	1.13	1.05	1.15
4990	3.51	3.53	0.02	28.55	4.38	1.29	1.13	1.22
5170	3.55	3.56	0.01	24.69	4.58	1.36	1.16	1.22
5540	3.61	3.62	0.01	20.83	4.94	1.45	1.18	1.18
5720	3.62	3.64	0.03	19.75	5.14	1.45	1.17	1.13
5900	3.61	3.66	0.05	18.68	5.49	1.45	1.16	1.09
6260	3.59	3.65	0.05	17.10	6.01	1.40	1.10	1.05
6600	3.57	3.63	0.06	16.13	6.37	1.33	1.03	1.14
7470	3.69	3.73	0.04	13.51	7.31	1.27	1.40	1.38

1. Total Loss=Insertion Loss + 3 dB splitter loss.

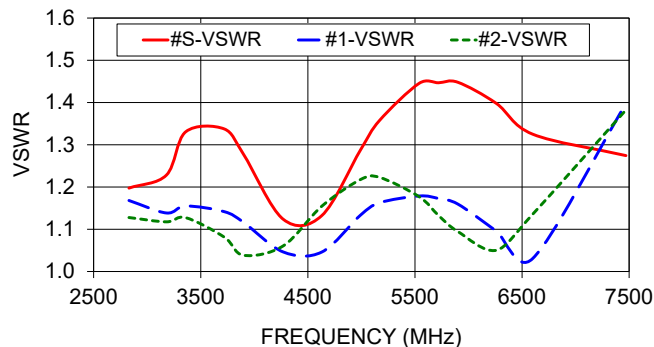
GP2X1+
TOTAL LOSS



GP2X1+
ISOLATION



GP2X1+
VSWR



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-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

