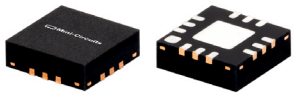
MMIC SURFACE MOUNT

Power Splitter/Combiner GP2X+

2 Way-0° 50Ω 2900 to 6200 MHz

FEATURES

- Wide Bandwidth, 2900 to 6200 MHz
- Excellent Amplitude Unbalance, Typ. 0.04 dB
- Good Phase Unbalance, Typ. 4 Deg.
- Small Size, 0.118 × 0.118 × 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

- ISM
- Instrumentation
- Radar
- WLAN
- Satellite Communications

ELECTRICAL SPECIFICATIONS AT +25 °C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Frequency Range		2900		6200	MHz
Insertion Loss* (Above 3.0 dB)	2900–6200	–	0.6	1.5	dB
Isolation	2900–6200	15	24	–	dB
Amplitude Unbalance	2900–6200	–	0.05	0.3	dB
Phase Unbalance	2900–6200	–	4.0	9.0	deg.
VSWR (Port S)	2900–6200	–	1.2	–	:1
VSWR (Ports 1,2)	2900–6200	–	1.2	–	

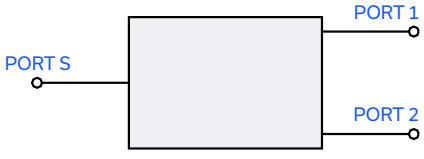
* De-embedded from demo board loss.

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. G
ECO-030197
GP2X+
MCL NY
260625

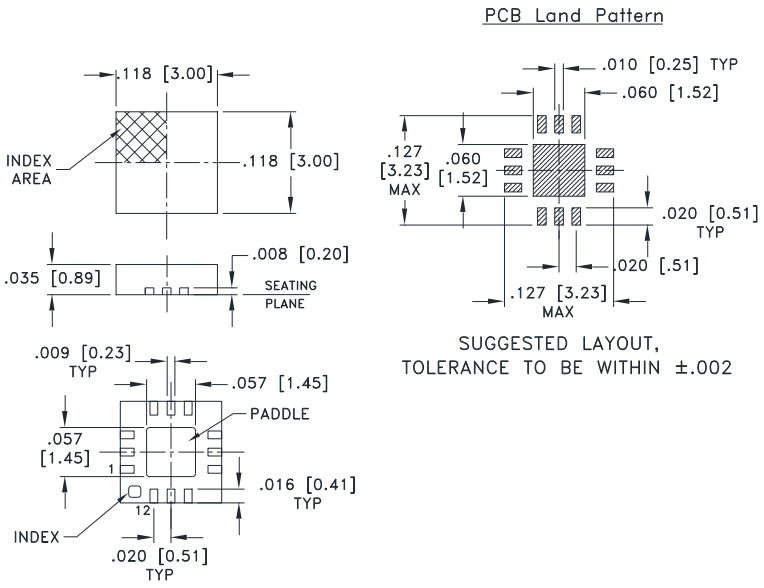
Power Splitter/Combiner GP2X+

2 Way-0° 50Ω 2900 to 6200 MHz

PAD CONNECTIONS

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

OUTLINE DRAWING

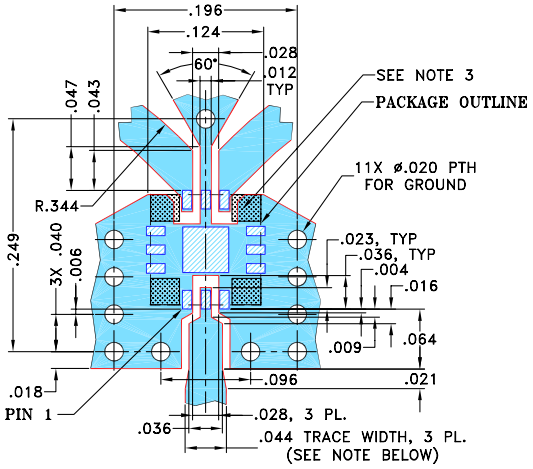


Weight: .02 Grams

Dimensions are in inches [mm]. Tolerances in inches: 2 Pl. ±.01; 3 Pl.±.004 inches

DEMO BOARD MCL P/N: TB-453-GPX+

SUGGESTED PCB LAYOUT (PL-282)



NOTES:

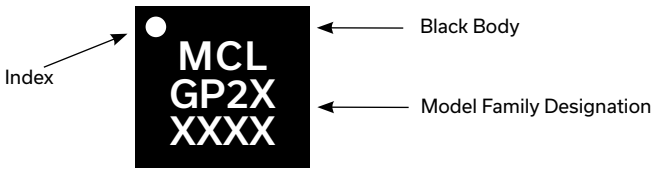
1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
3. SIGNAL TRACES ARE NOT ALLOWED INSIDE HATCHED AREAS (APPROX. .030 X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

TAPE & REEL INFORMATION: F66

PRODUCT MARKING



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

Power Splitter/Combiner GP2X+

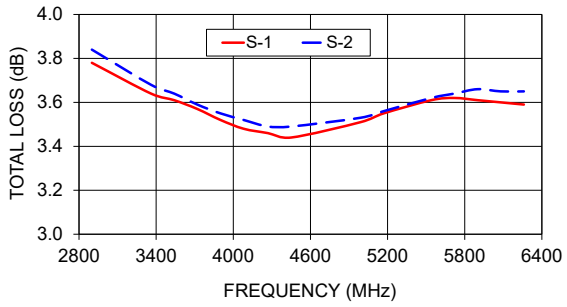
2 Way-0° 50Ω 2900 to 6200 MHz

TYPICAL PERFORMANCE DATA AND CHARTS

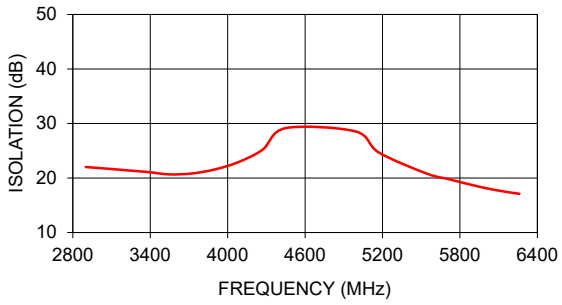
Frequency (MHz)	Total Loss[1] (dB) S-1	Total Loss[1] (dB) S-2	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
2900	3.78	3.84	0.06	22.02	2.44	1.08	1.14	1.11
3360	3.64	3.68	0.04	21.14	2.92	1.33	1.16	1.13
3540	3.61	3.64	0.03	20.67	3.08	1.36	1.15	1.11
3720	3.57	3.59	0.03	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
4080	3.48	3.52	0.03	22.89	3.42	1.20	1.09	1.01
4270	3.46	3.49	0.04	25.19	3.58	1.12	1.05	1.06
4450	3.44	3.49	0.04	29.16	3.77	1.09	1.01	1.11
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
6080	3.60	3.65	0.05	17.77	5.73	1.43	1.13	1.05
6260	3.59	3.65	0.05	17.10	6.01	1.40	1.10	1.05

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

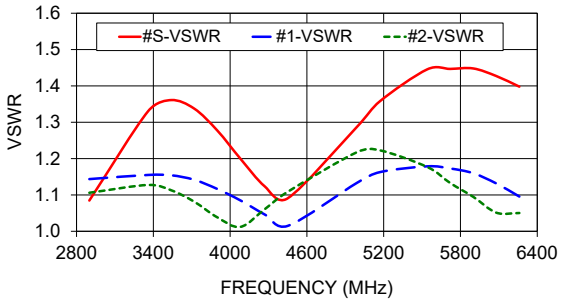
GP2X+
TOTAL LOSS



GP2X+
ISOLATION



GP2X+
VSWR



ESD RATING

Human Body Model (HBM): Class 1A (250 V to < 500 V) in accordance with ANSI/ESD STM 5.1 - 2001
Machine Model (MM): Class M2 (100 V to < 250 V) in accordance with ANSI/ESD STM 5.2 - 1999

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-Circuits' 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