



Mini-Circuits

MMIC SURFACE MOUNT

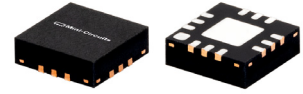
Power Splitter/Combiner

GP2Y1+

2 Way-0° 50Ω 1550 to 4400 MHz

FEATURES

- Wide Bandwidth, 1550 to 4400 MHz
- Excellent Isolation, Typ. 20 dB
- Excellent Amplitude Unbalance, Typ. 0.04 dB
- Good Phase Unbalance, Typ. 0.6 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

- WCDMA
- DCS
- Radar
- Navigation
- Instrumentation

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Frequency Range		1550		4400	MHz
Insertion Loss* (Above 3.0 dB)	1550-4400		1.0	1.9	dB
Isolation	1550-4400	12	20		dB
Amplitude Unbalance	1550-4400		0.04	0.3	dB
Phase Unbalance	1550-4400		0.6	6.0	deg.
VSWR (Port S)	1550-4400		1.4		:1
VSWR (Ports 1,2)	1550-4400		1.4		

* 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. F
ECO-026464
GP2Y1+
MCL NY
250807

Mini-Circuits

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

SEE NOTE 3

PACKAGE OUTLINE

11X $\varnothing$.020 PTH FOR GROUND

R.344

3X $\varnothing$.040

.006

.018

PIN 1

.036

.028, 3 PL.

.044 TRACE WIDTH, 3 PL.

(SEE NOTE BELOW)

.023, TYP

.036, TYP

.004

.016

.009

.064

.021

.096

.047

.043

.124

.196

60°

.028

.012 TYP

.249

 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 black body label:

- Index:** Points to the white circle in the top left corner.
- Black Body:** Points to the black rectangular area.
- Model Family Designation:** Points to the text "MCL GP2Y XXXX" on the black background.

Figure 1 consists of two sets of detail drawings for the upper and lower portions of a seat cushion. Each set includes a top view and a side view.

Upper Portion:

- Top View:** A square with a side length of 3.00 inches (76.2 mm). A hatched square in the top-left corner is labeled "INDEX AREA". The side length of the index area is .118 inches (3.00 mm).
- Side View:** Shows a cross-section of the upper portion. The total height is .035 inches (0.89 mm). The bottom surface is labeled "SEATING PLANE". The top surface is .008 inches (0.20 mm) thick.

Lower Portion:

- Top View:** A square with a side length of 3.00 inches (76.2 mm). A hatched square in the top-left corner is labeled "INDEX AREA". The side length of the index area is .118 inches (3.00 mm). The drawing includes several small rectangular features labeled "PADDLE" and "INDEX". Dimensions for these features are: .009 inches (0.23 mm) TYP, .057 inches (1.45 mm), .016 inches (0.41 mm) TYP, and .020 inches (0.51 mm) TYP.
- Side View:** Shows a cross-section of the lower portion. The total height is .035 inches (0.89 mm). The bottom surface is labeled "SEATING PLANE". The top surface is .008 inches (0.20 mm) thick.

TAPE & REEL INFORMATION: F66



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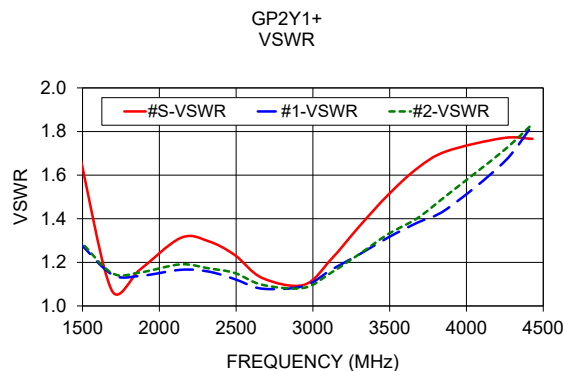
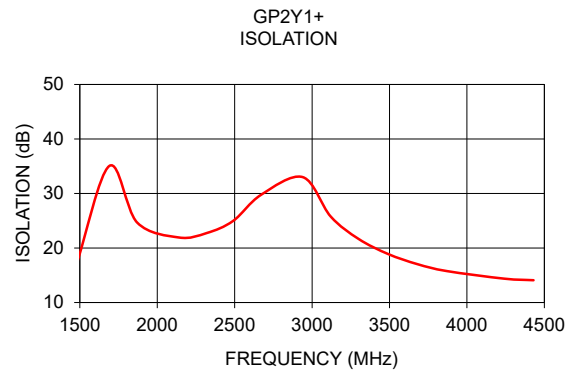
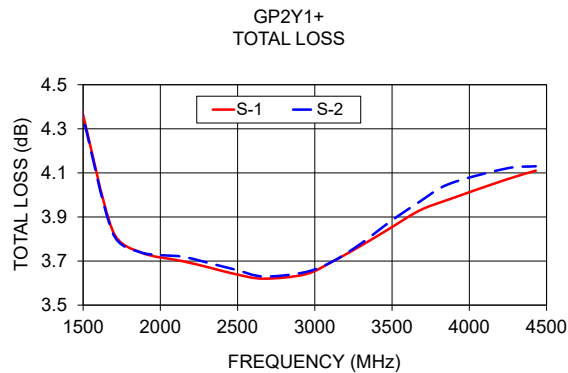
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2 Way-0° 50Ω 1550 to 4400 MHz

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						
1470	4.45	4.44	0.01	16.20	0.33	1.73	1.30	1.31
1690	3.84	3.83	0.01	35.04	0.41	1.07	1.15	1.15
1870	3.74	3.74	0.00	24.68	0.47	1.16	1.14	1.15
2140	3.70	3.72	0.02	21.93	0.54	1.31	1.17	1.19
2320	3.67	3.69	0.02	22.75	0.57	1.30	1.16	1.17
2490	3.64	3.66	0.02	24.97	0.59	1.23	1.12	1.15
2670	3.62	3.63	0.01	29.75	0.51	1.13	1.08	1.10
2940	3.64	3.65	0.00	33.00	0.45	1.10	1.09	1.08
3120	3.70	3.70	0.00	25.78	0.45	1.21	1.17	1.15
3300	3.77	3.78	0.01	21.67	0.49	1.36	1.24	1.24
3490	3.85	3.88	0.03	18.91	0.64	1.51	1.31	1.33
3680	3.93	3.97	0.04	17.04	0.71	1.63	1.38	1.40
3870	3.98	4.05	0.07	15.77	0.85	1.71	1.44	1.51
4240	4.07	4.12	0.05	14.38	1.01	1.77	1.66	1.71
4430	4.11	4.13	0.01	14.09	0.95	1.77	1.83	1.83

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



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-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

