

# Power Splitter/Combiner

2 Way-0° 50Ω 2900 to 6200 MHz

GP2X+



Generic photo used for illustration purposes only

CASE STYLE: DQ1225

+RoHS Compliant

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



Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500, 1000, 2000

## 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	0.75W max.

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

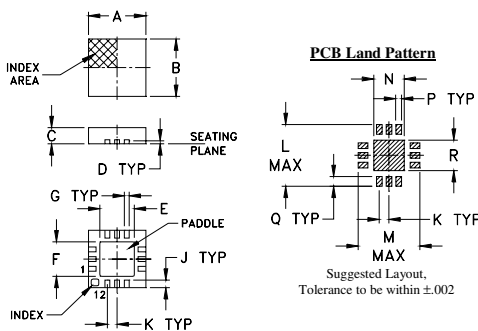
## Pad Connections

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

## Product Marking



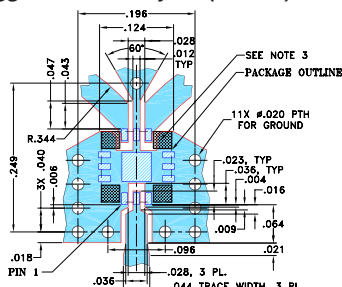
## Outline Drawing



## 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-453-GP2X+ Suggested PCB Layout (PL-282)



- 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-Circuits' applicable established test performance criteria and measurement instructions.
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## Features

- wide bandwidth, 2900 to 6200 MHz
- excellent amplitude unbalance, 0.05 dB typ.
- good phase unbalance, 3 deg. typ.
- small size, 0.118"x0.118"x0.035"
- high ESD level
- aqueous washable

## Applications

- WIMAX • ISM • instrumentation
- radar • WLAN
- satellite communications

## Electrical Specifications

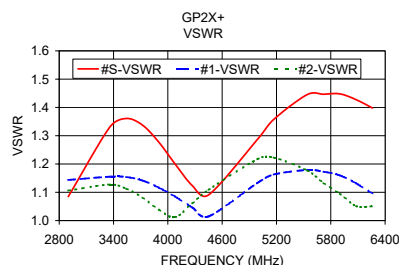
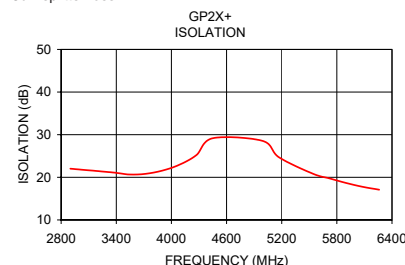
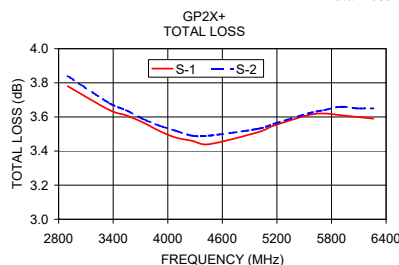
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS* (dB) ABOVE 3.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1) Typ.	
	Typ.	Min.	Typ.	Max.	Max.	Max.	Port S	Ports 1,2
2900-6200	24	15	0.6	1.5	9.0	0.3	1.2	1.2

\* De-embedded from demo board loss.

## Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
2900.00	3.78	3.84	0.06	22.02	2.44	1.08	1.14	1.11
3360.00	3.64	3.68	0.04	21.14	2.92	1.33	1.16	1.13
3540.00	3.61	3.64	0.03	20.67	3.08	1.36	1.15	1.11
3720.00	3.57	3.59	0.03	20.82	3.20	1.34	1.14	1.08
3900.00	3.52	3.55	0.02	21.57	3.30	1.28	1.12	1.04
4080.00	3.48	3.52	0.03	22.89	3.42	1.20	1.09	1.01
4270.00	3.46	3.49	0.04	25.19	3.58	1.12	1.05	1.06
4450.00	3.44	3.49	0.04	29.16	3.77	1.09	1.01	1.11
4990.00	3.51	3.53	0.02	28.55	4.38	1.29	1.13	1.22
5170.00	3.55	3.56	0.01	24.69	4.58	1.36	1.16	1.22
5540.00	3.61	3.62	0.01	20.83	4.94	1.45	1.18	1.18
5720.00	3.62	3.64	0.03	19.75	5.14	1.45	1.17	1.13
5900.00	3.61	3.66	0.05	18.68	5.49	1.45	1.16	1.09
6080.00	3.60	3.65	0.05	17.77	5.73	1.43	1.13	1.05
6260.00	3.59	3.65	0.05	17.10	6.01	1.40	1.10	1.05

1. Total Loss = Insertion Loss + 3dB 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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