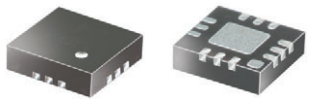
Surface Mount

Power Splitter/Combiner

GP2X1+

2 Way-0° 50Ω 2800 to 7200 MHz



CASE STYLE: DQ1225
PRICE: $1.49 ea. QTY. (25)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

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

Features

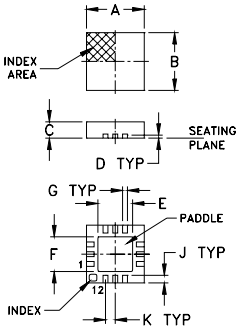
- very wide bandwidth, 2800 to 7200 MHz
- excellent amplitude unbalance, 0.1 dB typ.
- good phase unbalance, 3 deg. typ.
- small size, 0.118"x0.118"x0.035"
- high ESD level
- aqueous washable

Applications

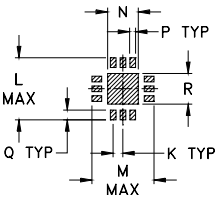
- WIMAX
- WLAN
- radar
- satellite communication
- ISM
- instrumentation

Product Marking

Outline Drawing



PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

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

Electrical Specifications

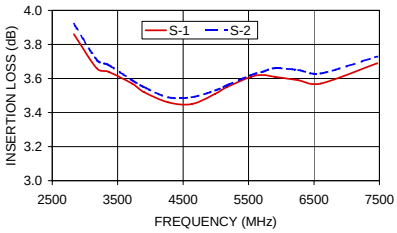
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS* (dB) ABOVE 3.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1) Typ.	
f_L-f_U	Typ.	Min.	Typ.	Max.	Max.	Max.	Port S	Ports 1,2
2800-7200	22	10	0.8	1.9	10.0	0.4	1.3	1.2

* De-embedded from demo board loss.

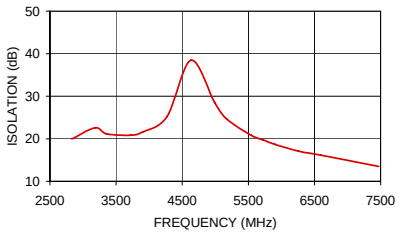
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
2830.00	3.86	3.92	0.06	19.96	2.37	1.20	1.17	1.13
3180.00	3.66	3.71	0.05	22.58	2.72	1.23	1.14	1.12
3360.00	3.64	3.68	0.04	21.14	2.92	1.33	1.16	1.13
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
4270.00	3.46	3.49	0.04	25.19	3.58	1.12	1.05	1.06
4630.00	3.45	3.49	0.04	38.44	3.97	1.13	1.05	1.15
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
6260.00	3.59	3.65	0.05	17.10	6.01	1.40	1.10	1.05
6600.00	3.57	3.63	0.06	16.13	6.37	1.33	1.03	1.14
7470.00	3.69	3.73	0.04	13.51	7.31	1.27	1.40	1.38

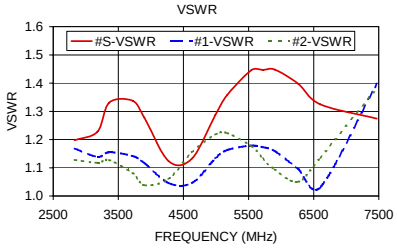
GP2X1+
INSERTION LOSS



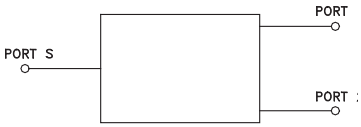
GP2X1+
ISOLATION



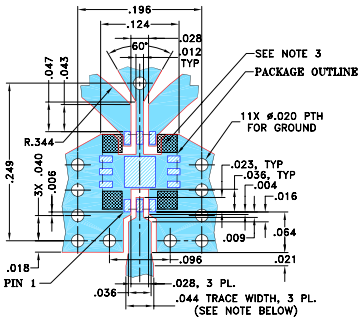
GP2X1+
VSWR



electrical schematic



Demo Board MCL P/N: TB-453-GP2X1+
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

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

Rev. A
M119987
GP2X1+
ED-13012A/3
RS/CP
090817