

Surface Mount

Power Splitter/Combiner

GP2S+

2 Way-0° 50Ω 800 to 2100 MHz

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.	

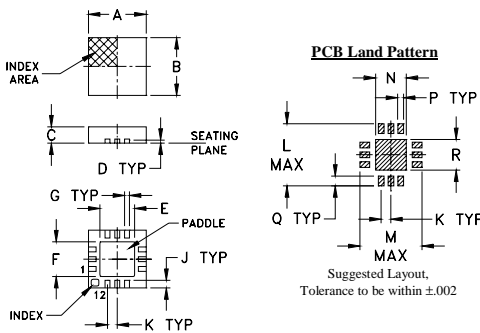
Pad Connections

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

Product Marking



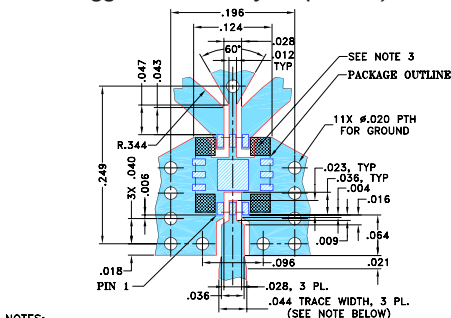
Outline Drawing



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-GP2S+ 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

Features

- wide bandwidth, 800 to 2100 MHz
- excellent isolation, 24 dB typ.
- excellent amplitude unbalance, 0.02 dB typ.
- good phase unbalance, 0.8 deg. typ.
- small size, 0.118"x0.118"x0.035"
- high ESD level
- aqueous washable

Applications

- cellular • GPS • DCS
- WCDMA • GSM • Korea PCS

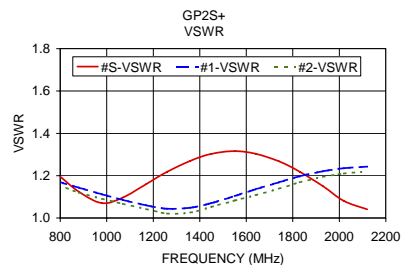
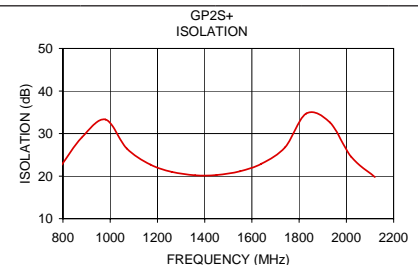
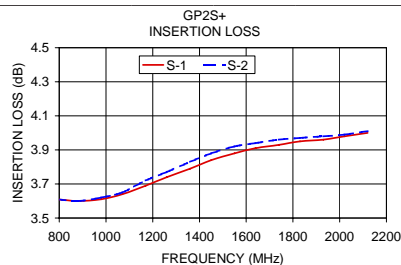
Electrical Specifications

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
800-2100	24	17	0.8	1.4	4.0	0.2	1.2	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						
790.00	3.61	3.61	0.00	22.30	0.49	1.21	1.17	1.16
880.00	3.60	3.60	0.00	29.08	0.52	1.12	1.14	1.12
980.00	3.61	3.62	0.01	33.32	0.57	1.07	1.11	1.09
1070.00	3.64	3.65	0.01	26.49	0.66	1.10	1.09	1.07
1170.00	3.69	3.72	0.02	22.70	0.72	1.16	1.06	1.04
1260.00	3.74	3.77	0.04	21.01	0.78	1.22	1.04	1.02
1360.00	3.79	3.83	0.04	20.20	0.83	1.27	1.05	1.03
1450.00	3.84	3.88	0.04	20.24	0.87	1.30	1.07	1.05
1550.00	3.88	3.92	0.04	21.14	0.91	1.32	1.10	1.08
1640.00	3.91	3.94	0.03	22.91	0.97	1.30	1.14	1.11
1740.00	3.93	3.96	0.03	26.76	1.05	1.27	1.17	1.14
1830.00	3.95	3.97	0.02	34.69	1.16	1.22	1.20	1.17
1930.00	3.96	3.98	0.02	32.63	1.28	1.15	1.22	1.19
2020.00	3.98	3.99	0.01	24.55	1.41	1.08	1.24	1.21
2120.00	4.00	4.01	0.01	19.78	1.57	1.04	1.24	1.22



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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ISO 9001 ISO 14001 AS 9100 CERTIFIED

IF/RF MICROWAVE COMPONENTS

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Rev. A
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GP2S+
ED-13012A/1
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