Narrow Band

Phase Shifter

JCPHS-2.5+

50Ω 180°Voltage Variable 1.8 to 2.5 MHz

CASE STYLE: BG419
PRICE: $32.95 ea. QTY (1-9)

+ 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℃ to 85℃
Storage Temperature	-55℃ to 100℃
RF Input Power	20 dBm max.
Control Voltage	20V

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

Pin Connections

IN	1
OUT	7
BIAS	8
GROUND	2,3,4,5,6,9,10,11,12,13,14

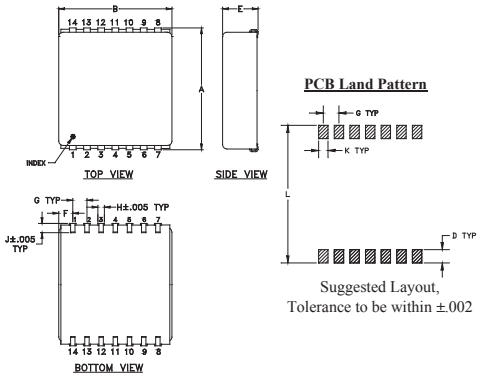
Features

- low insertion loss, 0.9 dB typ.
- good VSWR, 1.2:1 typ.
- solder-plated J-leads for excellent solderability and strain relief
- aqueous washable

Applications

- radio location
- maritime mobile

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F
.870	.800	--	.100	.400	.100
22.098	20.32	--	2.54	10.16	2.54

G	H	J	K	L	wt
.100	.047	.065	.065	.890	grams
2.54	1.1938	1.651	1.651	22.606	6.4

Phase Shifter Electrical Specifications

FREQUENCY (MHz)	PHASE RANGE (Degrees)	INSERTION LOSS (dB)		CONTROL VOLTAGE (V)	CONTROL BANDWIDTH (kHz)	VSWR (:1)	
	Min.	Typ.	Max.		Typ.	Typ.	Max.
1.8-2.5	180	0.9	2.7	0-18	DC-50	1.2	1.8

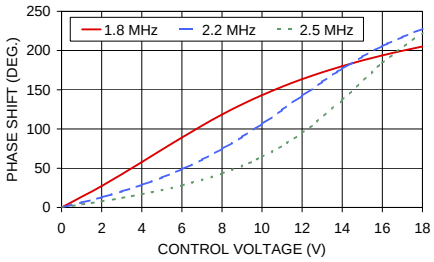
Maximum operating power, 0 dBm

Typical Performance Data

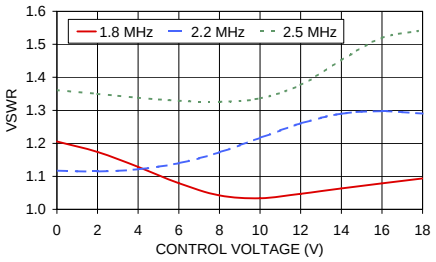
Control Voltage (V)	Phase Shift* (Degrees)			VSWR (:1)			Insertion Loss (dB)		
	1.8 MHz	2.2 MHz	2.5 MHz	1.8 MHz	2.2 MHz	2.5 MHz	1.8 MHz	2.2 MHz	2.5 MHz
0.0	0.00	0.00	0.00	1.21	1.12	1.36	1.57	1.01	1.00
2.0	27.36	12.96	7.66	1.17	1.12	1.35	1.66	1.16	1.08
4.0	57.85	28.73	16.68	1.13	1.12	1.34	1.80	1.34	1.17
6.0	89.17	48.73	28.00	1.08	1.14	1.33	1.78	1.56	1.30
8.0	118.37	74.58	43.16	1.04	1.17	1.33	1.60	1.80	1.48
10.0	143.18	106.54	64.34	1.03	1.22	1.34	1.36	1.95	1.73
12.0	163.56	142.37	95.00	1.05	1.26	1.38	1.14	1.88	2.03
14.0	180.16	176.76	137.06	1.06	1.29	1.45	0.97	1.60	2.18
16.0	193.88	205.68	184.07	1.08	1.30	1.52	0.84	1.28	1.94
18.0	205.05	227.58	222.53	1.09	1.29	1.54	0.75	1.04	1.51

* Normalized at control voltage = 0V

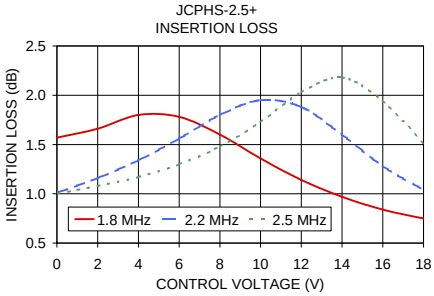
JCPHS-2.5+
PHASE SHIFT



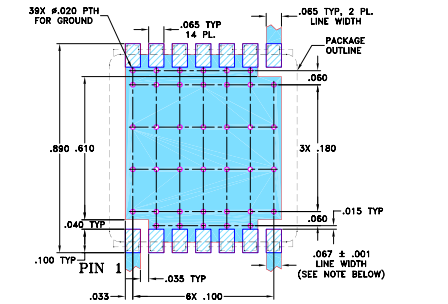
JCPHS-2.5+
VSWR



JCPHS-2.5+
INSERTION LOSS



Demo Board MCL P/N: TB-62
Suggested PCB Layout (PL-011)

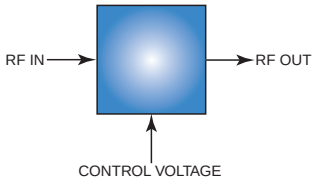


NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" ± 0.002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

electrical schematic



For detailed performance specs & shopping online see web site

REV. OR
M114536
JCPHS-2.5+
ED-13078A/1
DY/CP
071114