

Narrow Band

# Phase Shifter

## JSPHS-150

50Ω 180° Voltage Variable 100 to 150 MHz



CASE STYLE: BK276  
PRICE: \$31.95 ea. QTY (1-9)

### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Input Power	20 dBm max.
Control Voltage	20V

### Pin Connections

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

^ pins must be connected together externally

### Features

- good VSWR, 1.3 typ.
- low insertion loss, 1.0 dB typ.
- solder-plated J-leads for excellent solderability and strain relief
- aqueous washable

### Applications

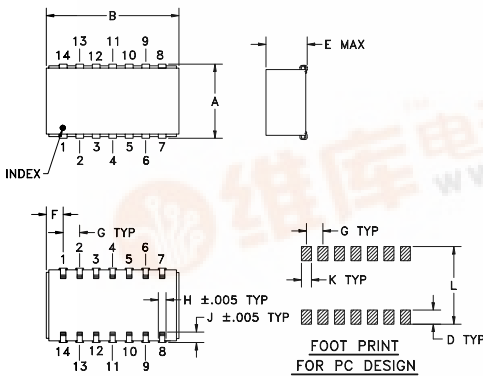
- aircraft communication
- delay for feed-forward amplifier

### Phase Shifter Electrical Specifications

FREQUENCY (MHz)	PHASE RANGE (Degrees)	INSERTION LOSS (dB)		CONTROL VOLTAGE (V)	CONTROL BANDWIDTH (kHz)	VSWR (:1)	
		Typ.	Max.			Typ.	Max.
100-150	180	1.2	2.5	0-12	DC-30	1.2	1.7

Maximum operating power, 0 dBm

### Outline Drawing



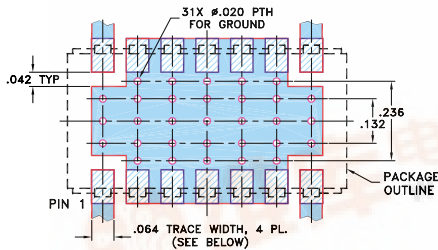
### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.450	.803	--	.100	.250	.102	.100
11.43	20.40	--	2.54	6.35	2.59	2.54

H	J	K	L	wt
.047	.065	.065	.470	grams
1.19	1.65	1.65	11.94	3.0

### Demo Board MCL P/N: TB-152 Suggested PCB Layout (PL-214)



NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS .030" ± .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

### Typical Performance Data

Control Voltage (V)	Phase Shift* (degrees)			VSWR (:1)			Insertion Loss (dB)		
	100 MHz	125 MHz	150 MHz	100 MHz	125 MHz	150 MHz	100 MHz	125 MHz	150 MHz
0.00	0.00	0.00	0.00	1.47	1.23	1.19	1.00	0.84	0.83
2.00	17.45	9.44	5.29	1.43	1.22	1.19	1.06	0.89	0.86
3.00	30.77	16.64	9.21	1.39	1.21	1.19	1.09	0.92	0.88
5.00	79.43	44.98	24.15	1.29	1.19	1.19	1.17	1.07	0.97
7.00	164.59	129.35	76.74	1.27	1.25	1.20	0.92	1.26	1.31
9.00	210.43	209.45	181.98	1.28	1.08	1.31	0.72	0.81	1.22
11.00	223.27	232.18	225.01	1.31	1.03	1.25	0.69	0.70	0.93
12.00	226.44	237.51	234.67	1.32	1.02	1.22	0.69	0.69	0.87

\*Normalized at control voltage=0V

