

Phase Shifter

JSPHS-446

50Ω 180° Voltage Variable 366 to 446 MHz

Maximum Ratings

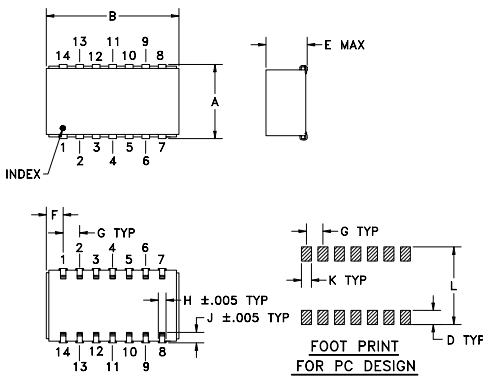
| | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Input Power | 20 dBm max. |
| Control Voltage | 20V |

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

Outline Drawing

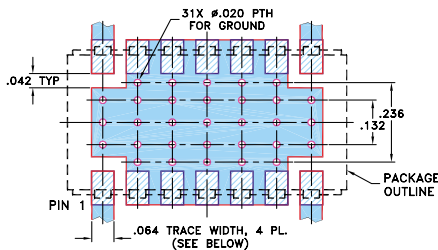


Outline Dimensions (inch/mm)

| 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 RO4350B 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

Features

- good VSWR, 1.3:1 typ.
- low insertion loss, 1.4 dB typ.
- solder-plated J-leads for excellent solderability and strain relief
- aqueous washable

Applications

- signal processing



CASE STYLE: BK276
 PRICE: \$32.95 ea. QTY (1-9)

Phase Shifter Electrical Specifications

| FREQUENCY (MHz) | PHASE RANGE (Degrees) | | INSERTION LOSS (dB) | | CONTROL VOLTAGE (V) | CONTROL BANDWIDTH (kHz) | VSWR (:1) | |
|-----------------|-----------------------|------|---------------------|------|---------------------|-------------------------|-----------|------|
| | Min. | Max. | Typ. | Max. | | | Typ. | Max. |
| 366-446 | 180 | | 1.2 | 2.5 | 0-12 | DC-50 | 1.2 | 1.7 |

Maximum operating power, 0 dBm

Typical Performance Data

| Control Voltage (V) | Phase Shift* (degrees) | | | VSWR (:1) | | | Insertion Loss (dB) | | |
|---------------------|------------------------|---------|---------|-----------|---------|---------|---------------------|---------|---------|
| | 366 MHz | 406 MHz | 446 MHz | 366 MHz | 406 MHz | 446 MHz | 366 MHz | 406 MHz | 446 MHz |
| 0.5 | 0.05 | 0.03 | 0.01 | 1.17 | 1.09 | 1.37 | 1.10 | 1.02 | 1.10 |
| 1.0 | 7.65 | 5.43 | 4.14 | 1.21 | 1.06 | 1.34 | 1.17 | 1.04 | 1.08 |
| 3.0 | 57.73 | 41.01 | 29.01 | 1.44 | 1.19 | 1.16 | 1.67 | 1.37 | 1.22 |
| 5.0 | 137.57 | 112.81 | 84.75 | 1.38 | 1.44 | 1.32 | 1.68 | 1.84 | 1.70 |
| 7.0 | 186.22 | 174.91 | 151.47 | 1.10 | 1.21 | 1.29 | 1.17 | 1.49 | 1.79 |
| 9.0 | 205.93 | 203.06 | 189.91 | 1.10 | 1.22 | 1.25 | 1.02 | 1.25 | 1.52 |
| 10.0 | 211.22 | 210.59 | 200.96 | 1.12 | 1.25 | 1.29 | 0.99 | 1.19 | 1.44 |

*Normalized at control voltage=0.5V

