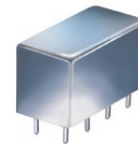


Narrow Band

Phase Shifter

50Ω 180° Voltage Variable 13 to 16 MHz

SPH-16+



CASE STYLE: A01
PRICE: \$32.20 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°C to 85°C
Storage Temperature	-55°C to 100°C
RF Input Power	20 dBm max.
Control Voltage	15V
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

IN	1
OUT	7
BIAS	4,6^
GROUND	2,3,5,8
CASE GROUND	2,3,5,8

^ pins must be connected together externally

Features

- low insertion loss, 1.2 dB typ.
- hermetically sealed

Applications

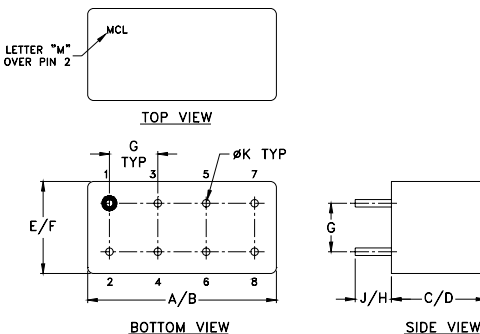
- signal processing

Phase Shifter Electrical Specifications

FREQUENCY (MHz)	PHASE RANGE (Degrees)	INSERTION LOSS (dB)		CONTROL VOLTAGE (V)	CONTROL BANDWIDTH (kHz)	VSWR (:1)	
	Min.	Typ.	Max.			Typ.	Max.
13-16	180	1.2	2.5	0-7	DC-50	1.2	1.7

Maximum operating power, 0 dBm

Outline Drawing



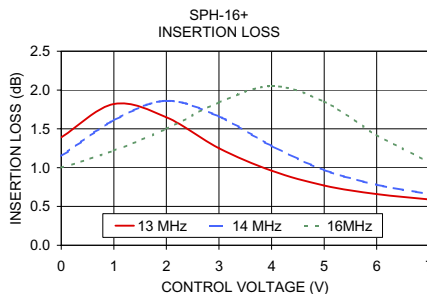
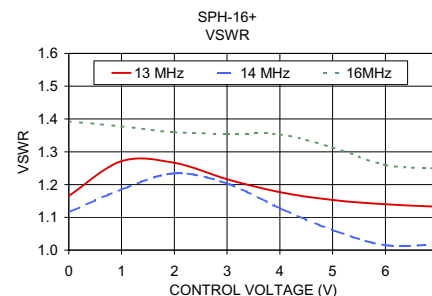
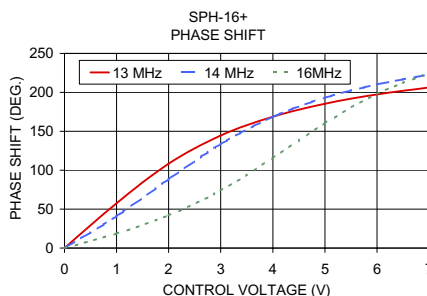
Outline Dimensions (inch/mm)

A	B	C	D	E	F
.770	.800	.385	.400	.370	.400
19.56	20.32	9.78	10.16	9.40	10.16
G	H	J	K	wt	
.200	.20	.14	.031	grams	
5.08	5.08	3.56	0.79	5.2	

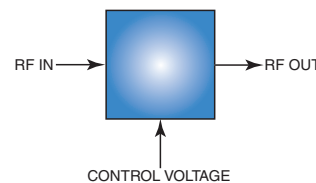
Typical Performance Data

Control Voltage (V)	Phase Shift* (Degrees)			VSWR (:1)			Insertion Loss (dB)		
	13 MHz	14 MHz	16 MHz	13 MHz	14 MHz	16 MHz	13 MHz	14 MHz	16 MHz
0.00	0.00	0.00	0.00	1.17	1.12	1.39	1.39	1.15	1.00
1.00	57.44	41.06	18.65	1.27	1.18	1.38	1.82	1.61	1.22
2.00	108.31	88.40	42.06	1.27	1.23	1.36	1.65	1.86	1.50
3.00	144.57	133.55	74.05	1.22	1.20	1.36	1.25	1.66	1.84
4.00	168.76	168.44	115.77	1.18	1.13	1.35	0.96	1.28	2.05
5.00	185.36	193.01	160.59	1.15	1.06	1.31	0.77	0.97	1.85
6.00	197.26	210.26	198.14	1.14	1.01	1.26	0.66	0.78	1.42
7.00	206.27	222.75	225.09	1.13	1.02	1.25	0.59	0.66	1.07

* Normalized at control voltage = 0 V



electrical schematic



For detailed performance specs & shopping online see web site

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P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

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