

Bi-Phase Modulators With Driver

2696-Series

Features

- Broadband Performance
- TTL Compatibility
- Small Lightweight Package
- Environmentally Sealed
- Solder Construction
- Low Insertion Loss
- Temperature Range: -40° to +95°C

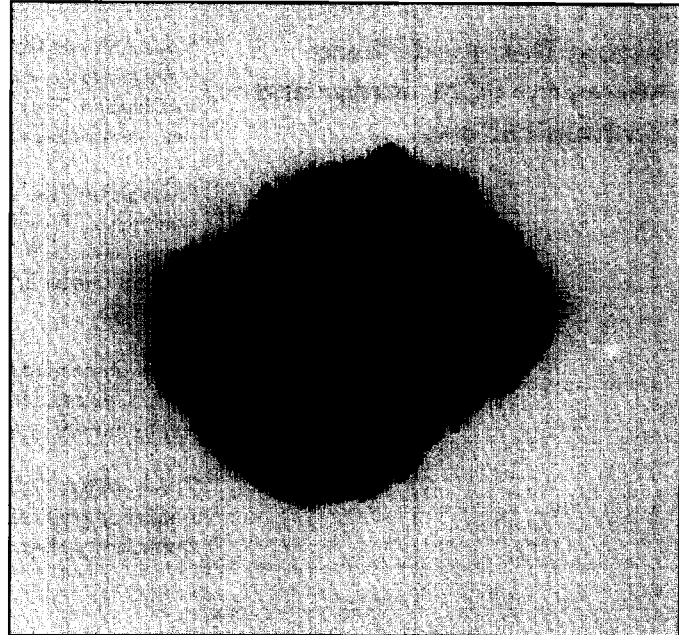
Description

M/A-COM's miniature 0-180° phase shifter is a vectorial phase shifting network utilizing PIN diodes together with broadband quadrature hybrid coupler circuits. It is driven by a hybrid-IC, TTL-compatible driver for convenient system applications. It features balanced insertion loss in both states, as well as broadband phase response. Applications include antenna beam steering and phase modulation.

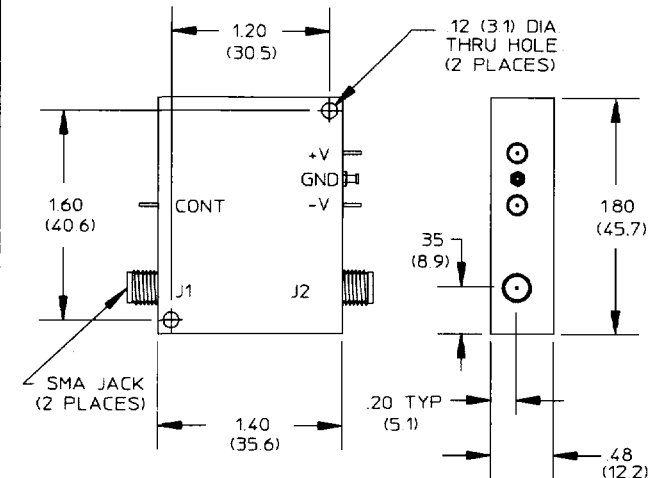
Environmental

These devices are designed to meet the following conditions:

Test	MIL-STD	Method	Cond
Temperature Cycle	883	1010	C
Const. Acceleration	883	2001	A
Vibration	202	214	
Solvent Resistance	883	2015	
Salt Spray	202	101	A
Moisture Resistance	202	106	
Maximum Ratings			
Storage Temp.	-65°C to +125°C		
Operating Temp.	-55°C to +95°C		

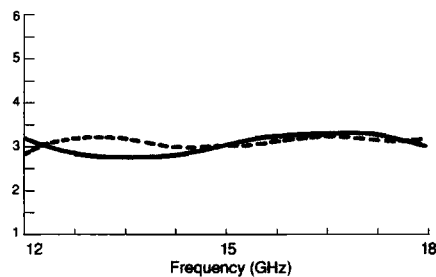


Mechanical Outline

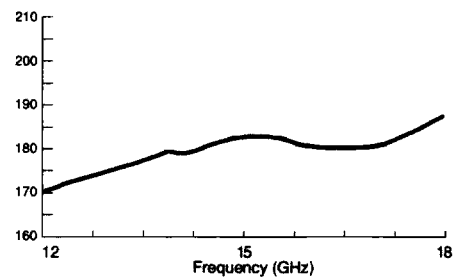


Typical Performance Data 2696-0109

Insertion Loss (dB)



Relative Phase Shift (degrees)



2696-Series

Specifications 25°C

Frequency Range (GHz)	VSWR	Insertion Loss (dB)	Phase Delta (Degrees)	Transition Time (nS)	Switching Time (nS)	Operating Power (W)	Part Number ⁵
2.0-4.0	1.60:1	1.8	180 ± 8	20	50	0.100	2696-0101-XY
	1.60:1	1.8	180 ± 8	300	500	0.500	2696-0102-XY
4.0-8.0	1.80:1	1.9	180 ± 10	20	50	0.100	2696-0103-XY
	1.80:1	1.9	180 ± 10	300	500	0.500	2696-0104-XY
8.0-12.0	1.80:1	2.7	180 ± 10	20	50	0.100	2696-0105-XY
	1.80:1	2.7	180 ± 10	300	500	0.500	2696-0106-XY
8.0-16.0	2.00:1	3.3	180 ± 15	20	50	0.100	2696-0107-XY
	2.00:1	3.3	180 ± 15	300	500	0.500	2696-0108-XY
12.0-18.0	2.00:1	3.5	180 ± 12	20	50	0.100	2696-0109-XY
	2.00:1	3.5	180 ± 12	300	500	0.500	2696-0110-XY

Notes:

- All units include TTL drivers.
- Driver current required: ±75 mA (typical).
- Transition Time measured from 10% to 90% of detected RF.
- Switching Time measured from 50% TTL to 10% or 90% of detected RF.
- Specify voltage and logic connector from option table.

- XY Option Table

X	Bias Voltage	Y	Logic Conn.
0	+5V/-12V	0	Solder Pin
1	+5V/-5V	1	SMC Conn.
2	+15V/-15V	2	SMA Conn.
3	+12V/-12V		
4	+5V/-15V		