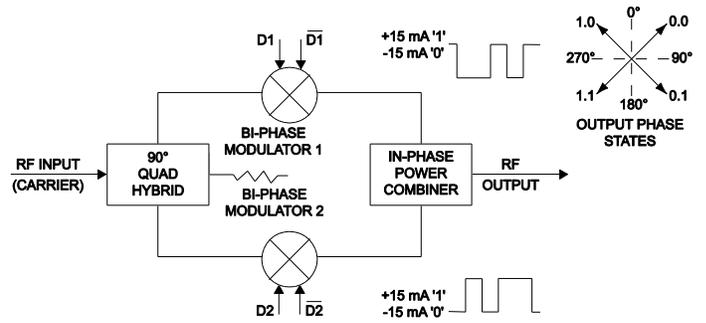


JPF-21F SERIES – QUADRAPHASE MODULATORS

TECHNICAL FEATURE

FEATURES

- Units to 3 GHz
- High Data Bandwidth
- Differential EXL/TTL Compatible Drive
- Hi-Rel Package

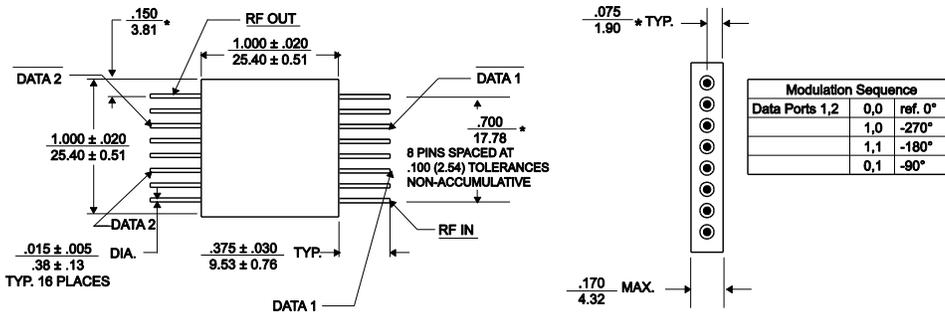


PERFORMANCE

Center Frequency f_0	1200-2500 MHz
RF Input Bandwidth.....	10% of f_0
Amplitude Balance at Center, f_0	1.3 dB max,
Phase Balance at Center, f_0	$\pm 2^\circ$ typ., $\pm 7^\circ$ max.
Phase Balance at 10% Band Limits.....	$\pm 2^\circ$ typ., $\pm 7^\circ$ max.
Insertion Loss.....	13.5 dB max.
Impedance.....	50 Ω nom.
VSWR.....RF Input	1.5:1 max
VSWR.....RF Output	2:1 max
RF Input Level.....	0 dBm nom.
Data Bandwidth.....	100 MHz nom.
Data Signal Levels.....	Logic 1:+15 mA nom.
.....	Logic 0:-15 mA nom.
Operating Temperature.....	-55° to +85°C

DESCRIPTION

Units in the JPF-21F series of Quadraphase Modulators are composed of two biphas modulators, a 90° quadrature hybrid and an in-phase power combiner. These devices are generally used in systems to generate QPSK coded signals. The units accept two differential data inputs each of which independently biphas modulates an RF carrier. These are then combined to produce a quadrature output of 0, 90, 180 and 270 degrees. Differential drive allows easy interface with ECL/TTL drivers. Units in the JPF-21F series are available from stock with a 1500 and 2500 MHz center frequency and from 1500 to 3000 MHz for special orders. Merrimac Quadraphase Modulators comply with the relevant sections of MIL-M-28837 and may be supplied screened for compliance with additional specifications for military and space applications requiring the highest reliability.



- NOTES:
1. Tolerance on 3 place decimals $\pm .010(.25)$ except as noted.
 2. Dimensions in inches over millimeters.
 3. Dimensions marked with * apply only at body.
 4. All unmarked pins are case ground.