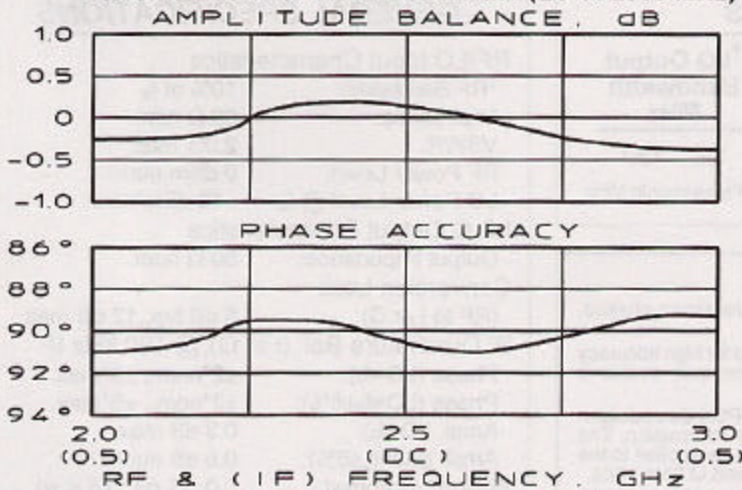


2.17

**Performance over Video Bandwidth (LO at 2500 MHz)**



**PRINCIPAL SPECIFICATIONS**

Model Number	LO Frequency
IQF-20F-***B	1200 to 3000 MHz

For complete model number replace \*\*\*with desired LO center freq.  $f_0$  in MHz.

**GENERAL SPECIFICATIONS**

**RF/LO Input Characteristics**

- †RF Bandwidth: 10% of  $f_0$
- Impedance: 50  $\Omega$  nom.
- VSWR: LO 1.5:1 max., RF 2:1 max.
- RF Power Level: 0 dBm nom.
- LO Power Level, @  $f_0$ : +10 dBm nom.

**I & Q Output Characteristics**

- Video Bandwidth, nom.: DC to †250 MHz
- Output Impedance: 50  $\Omega$  nom.

**Conversion Loss**

- (RF to I or Q): 10 dB typ.  
12 dB max.

**IF Quadrature Balance (I to Q), @ 100 kHz IF**

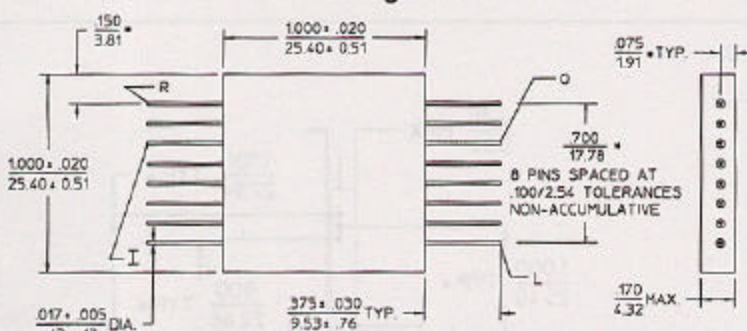
- Phase, @ LO =  $f_0$ :  $\pm 1^\circ$  typ.,  $\pm 2^\circ$  max.
- Phase, @ LO =  $f_0 \pm 5\%$ :  $\pm 3^\circ$  typ.,  $\pm 5^\circ$  max.
- Ampl., @ LO =  $f_0$ : 0.2 dB max.
- Ampl., @ LO =  $f_0 \pm 5\%$ : 0.5 dB max.

Weight, nominal: 0.35 oz (10 g)

Operating Temperature: -55° to +85°C

†RF and Video Bandwidths are typically much greater than that specified.

**F - Package Outline**



- NOTES:
1. Tolerance on 3 place decimals  $\pm 0.10(25)$  except as noted.
  2. Dimensions in inches over millimeters.
  3. Dimensions marked with \* apply only at body.
  4. All unmarked pins are case ground.

**General Notes:**

1. I & Q networks are integrated devices that produce two quadrature-phase, equal amplitude signals when fed RF and LO signals.
2. Comprised of standard components, these units are optimized for high accuracy at a given LO frequency and maintain specified performance across 10% of the LO bandwidth.
3. Merrimac I & Q Demodulators comply with the applicable sections of MIL-M-28837 and may be supplied screened for compliance with additional specifications for military and space applications requiring the highest reliability.

23Feb89