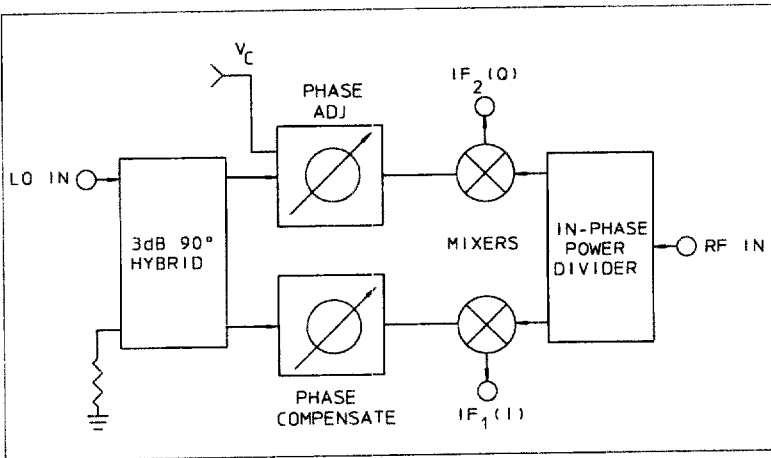
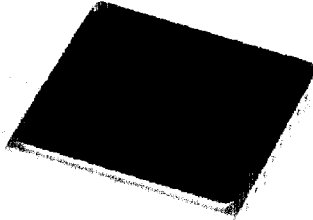


# IQF-25F Series

Units to 1 GHz / 10% Bandwidth / In-Circuit, Voltage Controlled Phase Balance / Hi-Rel Hermetic Pkg



## PRINCIPAL SPECIFICATIONS

| Model Number | Center Freq $f_0$ , MHz | <sup>†</sup> Bandwidth RF Input |
|--------------|-------------------------|---------------------------------|
| IQF-25F-***B | 20 – 1000               | 10% of $f_c$                    |

For complete Model Number replace \*\*\* with desired LO Frequency in MHz.

## GENERAL SPECIFICATIONS

### RF and LO Input Characteristics

|                 |                  |
|-----------------|------------------|
| Impedance:      | 50 $\Omega$ nom. |
| VSWR:           | 1.5:1 max.       |
| RF Power Level: | 0 dBm nom.       |
| LO Power Level: | +10 dBm nom.     |

### I & Q Output Characteristics

|                       |                           |
|-----------------------|---------------------------|
| Video Bandwidth, nom: | DC to <sup>†</sup> 50 MHz |
| Output Impedance:     | 50 $\Omega$ nom.          |

### Conversion Loss

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

### IF Balance (I to Q)

Phase, @  $V_c = +5V$ :  $90^\circ \pm 2^\circ$

Bias Control: 0 to +15V @1.5 mA max.

Adjustable Range:  $\pm 10^\circ$  nom.

Sensitivity:  $5^\circ/V$  nom.

Temperature Stability:  $\pm 1^\circ$  max.

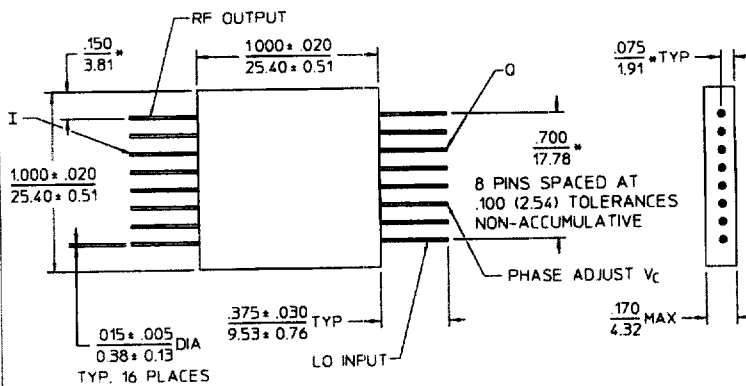
Amplitude: 0.2 dB max.

Weight, nominal: 0.35 oz (10g)

Operating Temperature:  $-55^\circ$  to  $+85^\circ C$

<sup>†</sup>RF and Video Bandwidths 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 an \* apply only at the body.
  4. All unmarked pins are case ground.

## General Notes:

1. I & Q networks are integrated devices that produce two quadrature-phased, equal amplitude signals when fed RF and LO signals.
2. The IQF-25F series features an in-circuit, voltage controlled phase balance that allows fine adjustment of phase. This feature provides accuracy not previously attainable in a comparably small package. In addition, the voltage controlled phase balance input facilitates closed loop, servo operation using the phase adjustment input as feedback.
3. Merrimac I & Q networks 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.