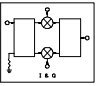
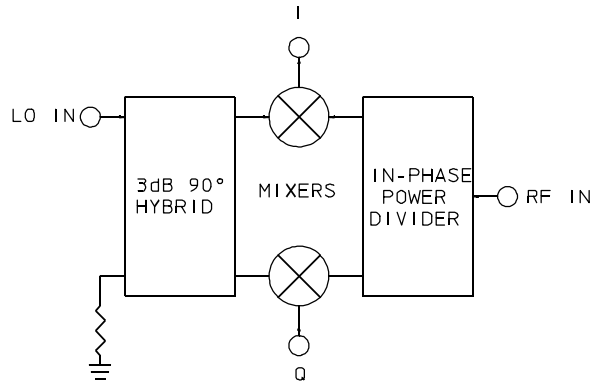




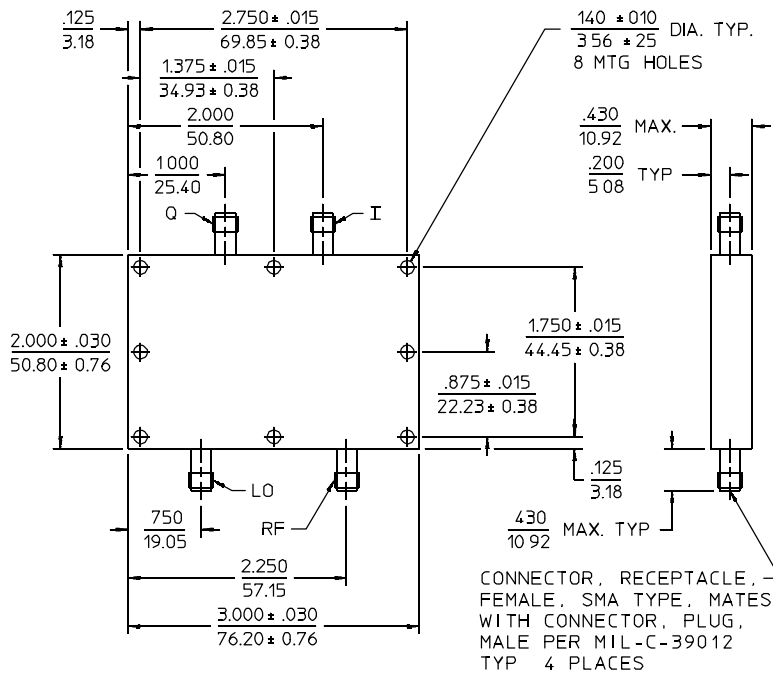
# IQM-9B-500

# I&Q NETWORK

30 to 1000 MHz / Ultrawide Bandwidth / Spread Spectrum Applications / SMA Connectors



## B - Package Outline



NOTES:  
 1. Tolerance on 3 place decimals  $\pm .020(.51)$  except as noted.  
 2. Dimensions in inches over millimeters.

## PRINCIPAL SPECIFICATIONS

| Model Number | LO/RF Bandwidth | Phase Balance          |
|--------------|-----------------|------------------------|
| IQM-9B-500   | 30 - 1000 MHz   | $90^\circ \pm 7^\circ$ |

## GENERAL SPECIFICATIONS

### RF and LO Input Characteristics

Impedance: 50  $\Omega$  nom.  
 VSWR: 1.3:1 typ, 1.7:1 max.  
 RF Power Level: 0 dBm nom.  
 LO Power Level: +11.5 dBm nom.\*  
 Isolation (L-R): 40 dB min.

### I & Q Output Characteristics

Amplitude Balance: 0.75 dB  
 Video Bandwidth, min:  $\dagger$ 100 MHz, nom  
 Two Tone, 3rd Order

Input Intercept: +16 dBm typ.  
 Output Impedance: 50  $\Omega$  nom.

### Conversion Loss

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

Weight, nominal: 3 oz (84 g)

Operating Temp:  $-55^\circ$  to  $+85^\circ\text{C}$

$\dagger$ Video Bandwidths are typically much greater than specified.

\*Higher LO Power versions available to special order.

## General Notes:

- I & Q networks are integrated networks that produce two quadrature phased, equal amplitude signals when fed RF and LO signals.
- The IQM-9B-500 I&Q network includes specially designed lead/lag circuits to provide superior performance across extraordinarily wide bandwidths as is required in applications such as spread spectrum communications.
- 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.

23Feb96