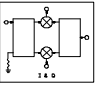
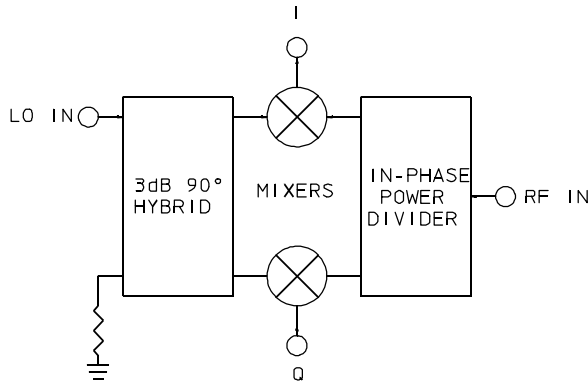


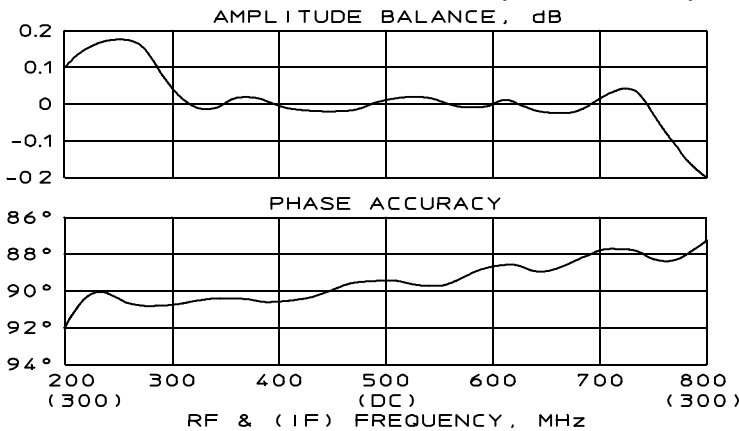
IQG-20E Series

I&Q NETWORKS

Units to 1 GHz / Low Loss / Close Tolerance in Both Phase and Amplitude / Hi-Rel Hermetic Package



Performance over Video Bandwidth (LO at 500 MHz)



PRINCIPAL SPECIFICATIONS

Model Number	LO Frequency, f_0 , MHz	†Video BW, MHz
IQG-20E-***B	20 - 160	50
IQG-20E-***B	160 - 1000	100

For Model Number replace *** with LO Center Frequency, f_0 in MHz.

GENERAL SPECIFICATIONS

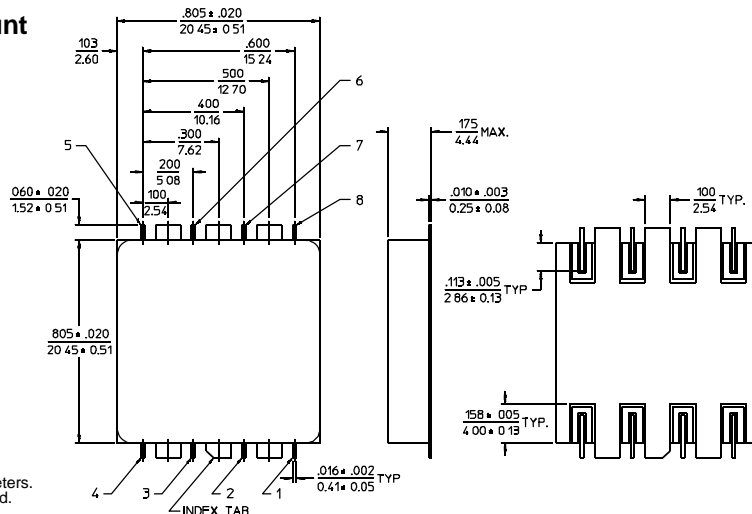
RF/LO Input Characteristics (50 Ω nom.)
 VSWR: 1.5:1 max.
 RF Bandwidth: 10% of f_0
 Power Level: 0 dBm nom.
 LO Power Level @ f_0 : +10 dBm nom.
 Conversion Loss
 (RF to I/Q): 10 dB typ, 12 dB max.
 IF Quadrature Balance (I to Q), @100 kHz IF
 Phase, @ LO= f_0 : $\pm 1^\circ$ nom., $\pm 2^\circ$ max.
 Phase, @ LO= $f_0 \pm 5\%$: $\pm 3^\circ$ nom., $\pm 5^\circ$ max.
 Ampl., @ LO= f_0 : 0.2 dB max.
 Ampl., @ LO= $f_0 \pm 5\%$: 0.5 dB max.
 Weight, nominal: 0.32 oz (9 g)
 Operating Temp: -55° to $+85^\circ$ C

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

General Notes:

- I & Q networks are integrated networks that produce two quadrature phased, equal amplitude signals when fed RF and LO signals.
- The IQG-20E is specially tailored for high accuracy at a specified LO frequency. It maintains the minimum specified performance across a band equal to 10% of the LO frequency.
- 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.

E - Size Surface Mount



PIN NO.	FUNCTION
1	GROUND
2	Q OUTPUT
3	GROUND
4	LO INPUT
5	GROUND
6	GROUND
7	I OUTPUT
8	RF INPUT

- NOTES:
- Tolerance on 3 place decimals $\pm 0.10(.25)$ except as noted.
 - Dimensions in inches over millimeters.
 - All unmarked pins are case ground.

13Feb96