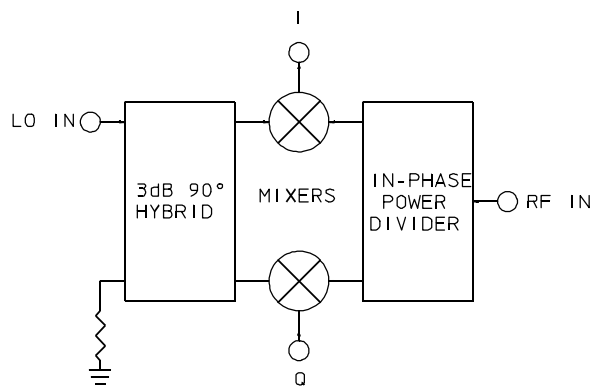


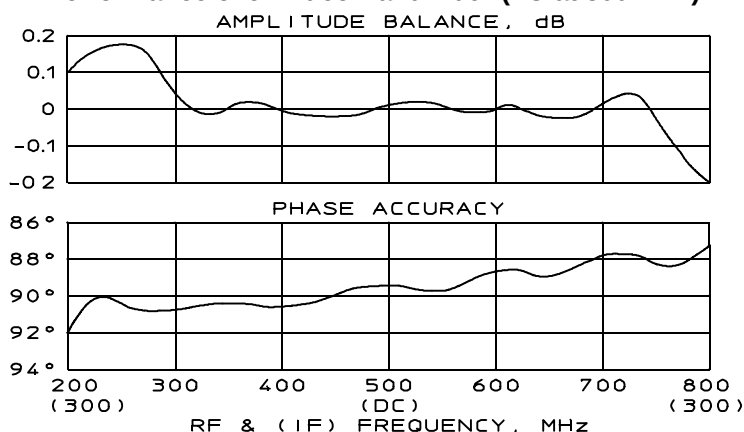
IQG-20E Series

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)



General Notes:

1. I & Q networks are integrated networks that produce two quadrature phased, equal amplitude signals when fed RF and LO signals.
2. 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.
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.

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.

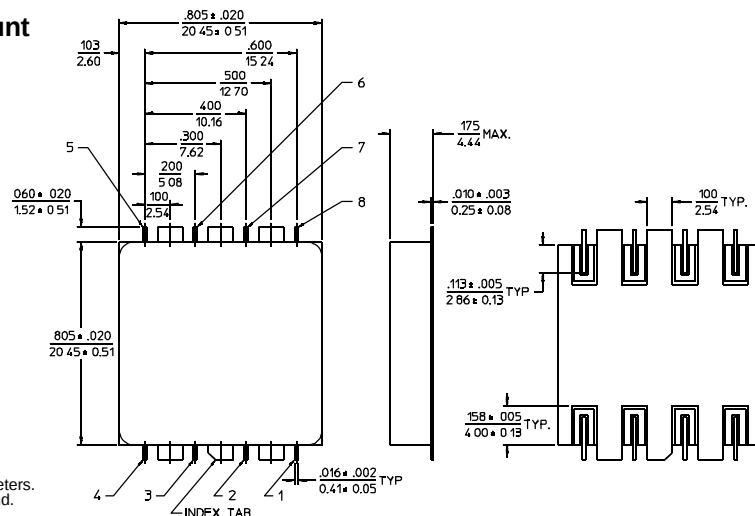
Ampl., @ $LO=f_0 \pm 5\%$: 0.5 dB max.

Weight, nominal: 0.32 oz (9 g)

Operating Temp: -55° to $+85^\circ$ C

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

E - Size Surface Mount



NOTES:

1. Tolerance on 3 place decimals $\pm .010(.25)$ except as noted.
2. Dimensions in inches over millimeters.
3. All unmarked pins are case ground.

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

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For further information contact **MERRIMAC / 41 Fairfield Pl, West Caldwell, NJ, 07006 / 973-575-1300 / FAX 973-575-0531**