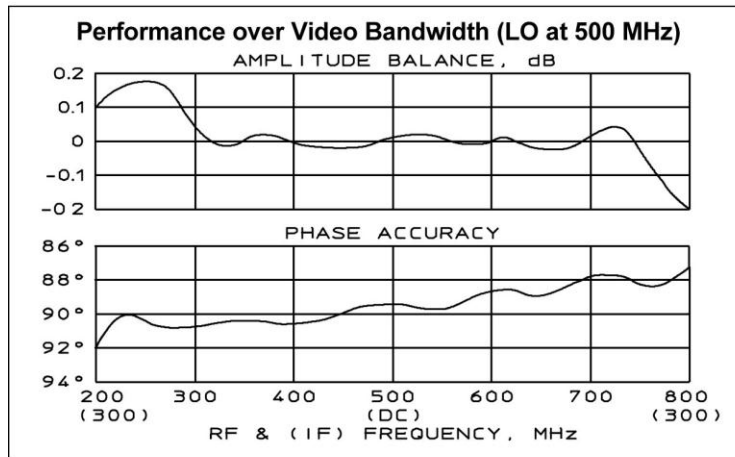
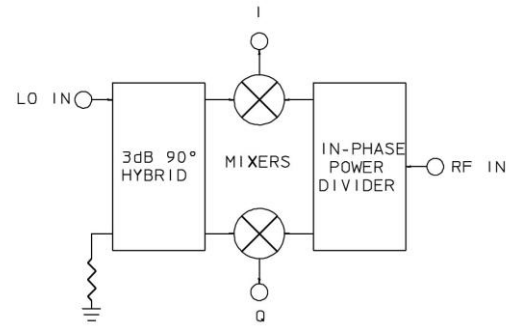


# IQG-20E SERIES – I&Q NETWORKS

## TECHNICAL FEATURE

### FEATURES

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



### 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 $\Omega$ 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°C

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

**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.

### E - Size Surface Mount

**NOTES:**

1. Tolerance on 3 place decimals  $\pm 0.10(.25)$  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

