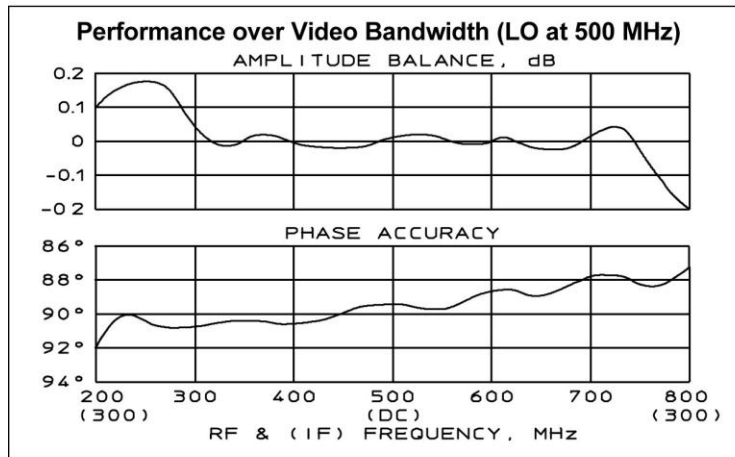
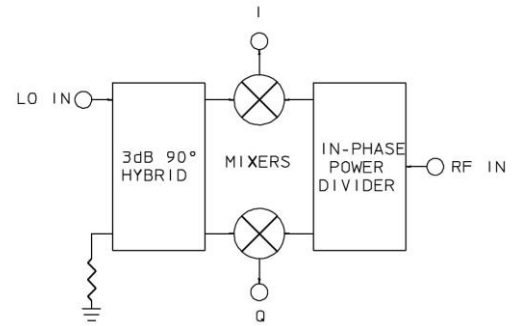


# IQG-20E SERIES – I&Q NETWORKS

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

†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**

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

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.

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