

PRINCIPAL SPECIFICATIONS

Model Number	LO Frequency f_0 , MHz	†Bandwidth RF Input
IQF-27L-***B	20 - 200	10% of f_0

For complete Model Number replace *** with desired LO Frequency in MHz.

GENERAL SPECIFICATIONS

RF and LO Input Characteristics
 Impedance: 50 Ω nom.
 VSWR: 1.5:1 max.
 RF Power Level: 0 dBm nom.
 LO Power Level: +10 dBm nom.

I & Q Output Characteristics
 Video Bandwidth: DC to †50 MHz nom.
 Output Impedance: 50 Ω nom.

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

IF Balance (I to Q) @ $V_c = +5V$
 Phase: $90^\circ \pm 2^\circ$
 Amplitude: 0 ± 0.2 dB

Bias Controls, @ f_0 :
 Phase Tuning: $\pm 5^\circ$ nom.
 Amplitude Range: ± 1 dB nom.

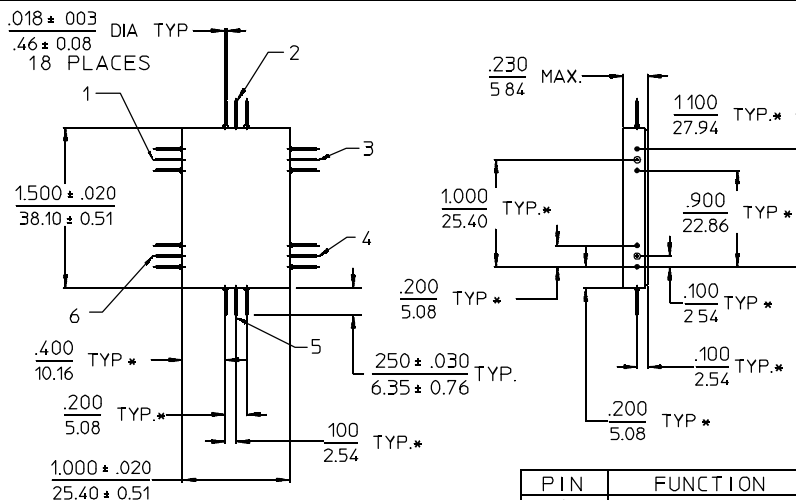
Temperature Stability: ± 0.2 dB, $\pm 1^\circ$ max.
Operating Temp: -55° to $+85^\circ C$
Weight, nominal: 0.55 oz (15.4 g)

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

General Notes:

- I & Q networks are integrated devices that produce two quadrature-phased, equal amplitude signals when fed RF and LO signals.
- The IQF-27L series features in-circuit, voltage controlled phase and amplitude balance adjustments that allow fine adjustments when the device is in its normal operating environment. These features provides accuracy not previously attainable in a comparably small package. In addition, the voltage controlled phase and amplitude balance inputs facilitate closed loop, servo operation using the adjustment inputs in the feedback loops.
- 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.

L - Package Outline



NOTES:

- Tolerance on 3 place decimals $\pm 0.10(25)$ except as noted.
- Dimensions in inches over millimeters.
- Dimensions marked with * apply only at body.
- All unmarked pins are case ground.

PIN	FUNCTION
1	Phase Adjust
2	LO Input
3	I Output
4	Amplitude Adjust
5	RF Input
6	Q Output

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