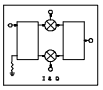
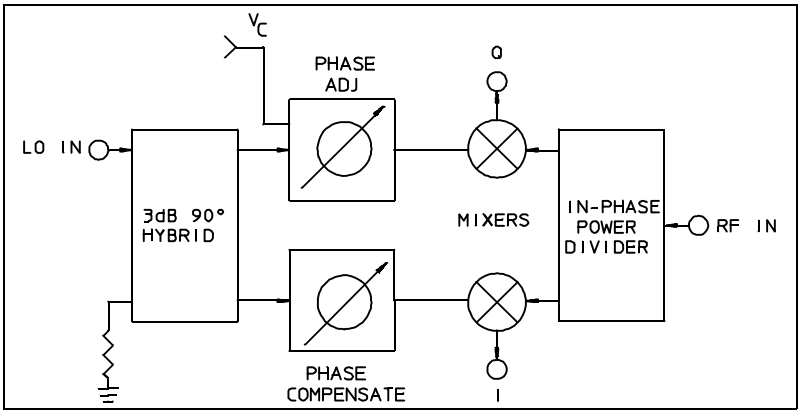
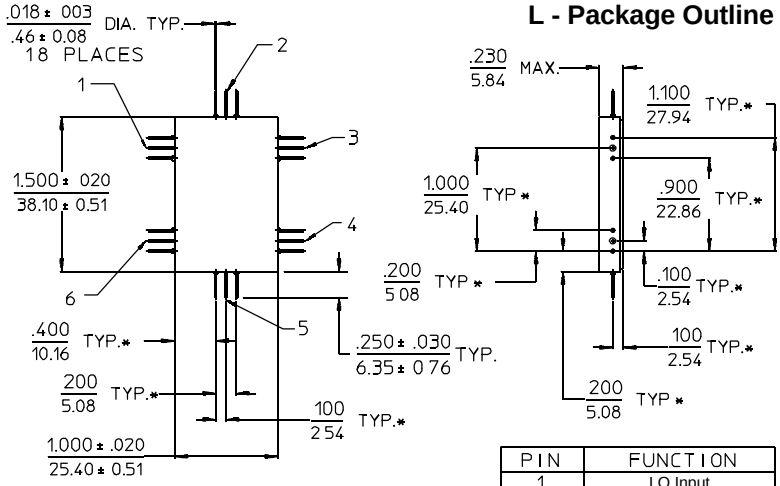
IQF-25L Series I&Q NETWORKS

1.5 to 3 GHz / 10 % Bandwidth / In-Circuit, Voltage Controlled Phase Balance / Hi-Rel Hermetic Pkg





L - Package Outline



PIN	FUNCTION
1	LO Input
2	Not Used
3	Phase Adjust
4	I Output
5	RF Input
6	Q Output

NOTES:
1. Tolerance on 3 place decimals ±.010(.25) except as noted.
2. Dimensions in inches over millimeters.
3. Dimensions marked with * apply only at body.
4. All unmarked pins are case ground.

PRINCIPAL SPECIFICATIONS

Model Number	LO Frequency, f_o, MHz	†Bandwidth RF Input
IQF-25L-***B	1500 - 3000	10% of f_o

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, nom:	DC to †100 MHz
Output Impedance:	50 Ω nom.
Conversion Loss	
(RF to I or Q):	10 dB typ., 12 dB max.
IF Balance (I to Q)	
Phase, @ V_C=+5V:	90° ± 5°
Bias Control:	0 to +15V
Phase Tuning Range:	±10° nom., @ f_o
Tuning Sensitivity:	4°/V nom.
Temperature Stability:	±1° nom.,±2° max.
Amplitude:	0.2 dB max.
Weight, nominal	0.55 oz (15.4 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 devices that produce two quadrature-phased, equal amplitude signals when fed RF and LO signals.

2. The IQF-25L series features an in-circuit, voltage controlled phase balance that allows fine adjustment of phase. This feature provides accuracy not previously attainable in a comparably small package. In addition, the voltage controlled phase balance input facilitates closed loop, servo operation using the phase adjustment input as feedback.

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.

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