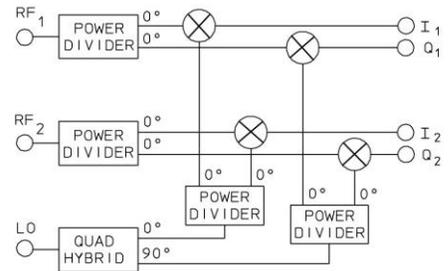


IDP-2S SERIES – I&Q NETWORKS

TECHNICAL FEATURE

FEATURES

- 2 to 500 MHz
- Two I&Q Phase Detectors with Common LO
- Hermetic Package



PRINCIPAL SPECIFICATIONS

Model Number	RF/LO Center Frequency, f_0	†Bandwidth MHz
IDP-2S-***B	20 to 500 MHz	10% of f_0

†RF and video bandwidths are typically much greater than specified.
*** Insert center 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: +14 dBm nom.

I & Q Output Characteristics

Video Bandwidth: DC to †50 MHz nom.
 Output Impedance: 50 Ω nom.

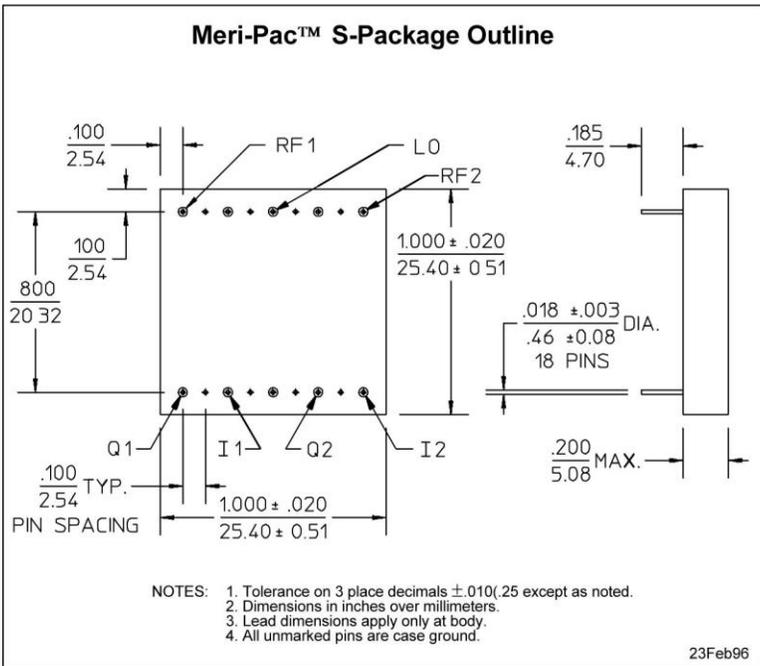
Conversion Loss
 (RF to I or Q): 10 dB typ.

IF Balance
 12 dB max.

Phase:
 $0 \pm 5^\circ$ max. ($I_1 - I_2$ or $Q_1 - Q_2$)
 $90 \pm 5^\circ$ max. ($I_1 - Q_1$ or $I_2 - Q_2$)

Amplitude: 0.5 dB typ., 1 dB max.

Weight, nominal: 0.35 oz (10 g)
Operating Temp: -55°C to +85°C



AVAILABLE OPTIONS

Phase Balance: $90^\circ \pm 2^\circ$ max.
Amplitude Balance: 0.5 dB max.
Wider Bandwidth: Customized units

General Notes:

1. Dual I & Q networks are integrated devices that produce two pairs of quadrature-phased, equal amplitude signals when fed by two IF signals and an LO signal as shown in the schematic above.
2. Merrimac's IDP-2S series combines two matched circuits in one package. Both lumped and distributed circuit technologies are used to minimize size and weight while maintaining excellent overall performance.
3. Merrimac's I & Q networks comply with the relevant sections of MIL-M-28837 and may be screened for compliance with additional specifications for military and space applications requiring the highest reliability.



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