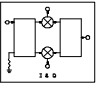
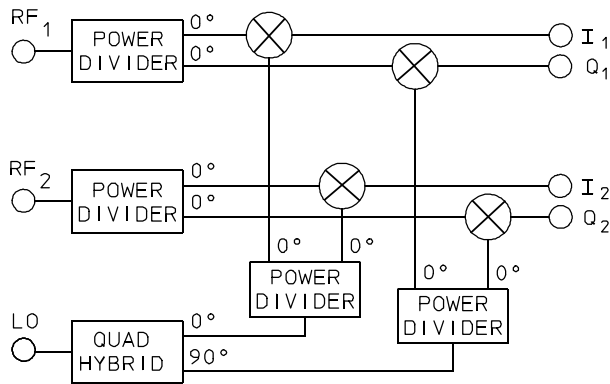


# IDP-2S Series

# I&Q NETWORKS

20 to 500 MHz / Two I&Q Phase Detectors with Common LO / Hermetic Package



## PRINCIPAL SPECIFICATIONS

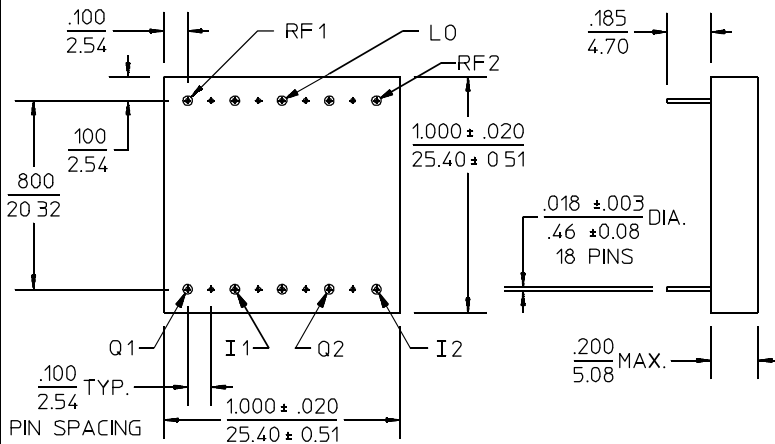
Model Number	RF/LO Center Frequency, $f_0$	†Bandwidth MHz
IDP-2S-***B	20 to 500 MHz	10% of $f_0$

†RF and video bandwidths are typically much greater than specified.  
 \*\*\* Insert center frequency in MHz.

## GENERAL SPECIFICATIONS

<b>RF and LO Input Characteristics</b>	
Impedance:	50 $\Omega$ nom.
VSWR:	1.5:1 max.
RF Power Level:	0 dBm nom.
LO Power Level	+14 dBm nom.
<b>I &amp; Q Output Characteristics</b>	
Video Bandwidth:	DC to †50 MHz nom.
Output Impedance:	50 $\Omega$ nom.
<b>Conversion Loss</b>	
(RF to I or Q):	10 dB typ.
<b>IF Balance</b>	
Phase:	0 $\pm$ 5° max. (I1 - I2 or Q1 - Q2) 90 $\pm$ 5° max. (I1 - Q1 or I2 - Q2)
Amplitude:	0.5 dB typ., 1 dB max.
Weight, nominal:	0.35 oz (10 g)
Operating Temp:	-55° to +85°C

## Meri-Pac™ S-Package Outline



- NOTES:
1. Tolerance on 3 place decimals  $\pm .010$  (.25 except as noted).
  2. Dimensions in inches over millimeters.
  3. Lead dimensions apply only at body.
  4. All unmarked pins are case ground.

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## AVAILABLE OPTIONS

Phase Balance:	90° $\pm$ 2° 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.