

# Frequency Conversion Products

Mercury Systems is a leading designer and manufacturer of microwave receiving and signal processing components for military and commercial applications. Our solutions include a complete line of frequency conversion products ranging from 0.1 GHz to 26.5 GHz.

Our mixers are designed and built with quality and reliability as key ingredients. Specialized manufacturing technology and large investment in test and verification equipment, enables us to produce cost effective, standard and application specific configurations quickly and reliably.

## Low loss—High Isolation

Mixer configurations are available in all microwave frequency bands, from communication to ultra broadband used within military applications. Additional options include a wide selection of IF bands and various input power levels.

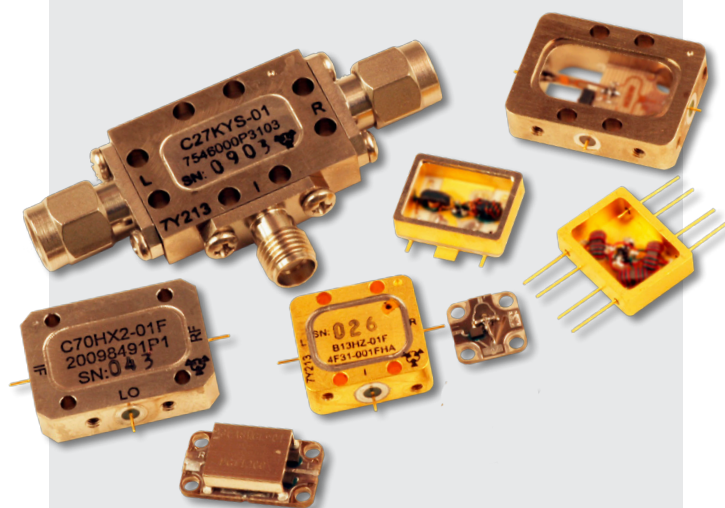
Optimized monolithic Schottky barrier-quads are integrated into matched structures that provide low conversion loss and high isolation.

- IQ Mixers feature high isolation and excellent image rejection
- Frequency Doublers offering low conversion loss
- Triple Balanced Mixers with RF Broadband and IF coverage
- Double Balanced Mixers feature high isolation and low conversion loss
- Broadband Double Balanced Mixers include excellent performance and temperature stability
- RF Termination Insensitive Mixers

Choose from many cataloged mixers or ready-to-build models, or connect with our engineers to have a mixer designed to your specifications.

## Features

- Mixers from 0.1 GHz to 26.5 GHz
- High isolation
- Low conversion loss
- Excellent image rejection
- Power efficient high intercept point mixers
- Customization options available for all specifications



# Double Balanced Mixer U20HXS

RF: 2.0 - 18.0 GHz

LO: 2.0 - 18.0 GHz

IF: DC - 2.0 GHz

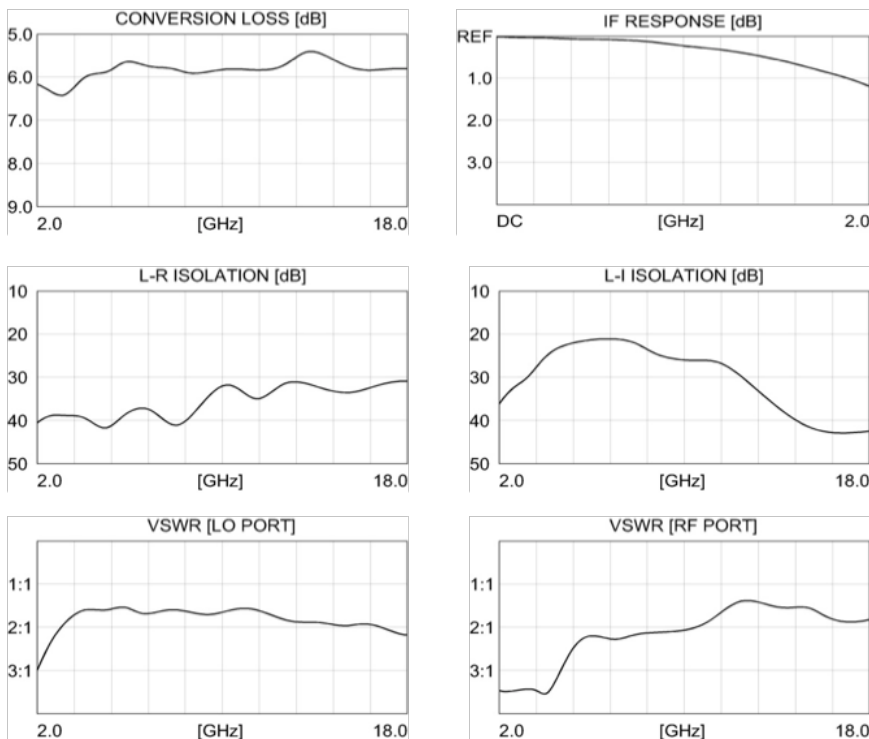
## Specifications

PARAMETER	LO [GHz]	RF [GHz]	IF [GHz]	MIN	TYP	MAX	LO DRIVE OPTION
Conversion Loss [dB]	2.0 - 18.0	2.0 - 18.0	DC - 2.0		7.0	9.0	
L-R Isolation [dB]	2.0 - 18.0	2.0 - 18.0		25	35		
L-I Isolation [dB]	2.0 - 18.0	2.0 - 18.0			25		
R-I Isolation [dB]	2.0 - 18.0	2.0 - 18.0			30		
Input 1 dB Compression [dBm]	2.0 - 18.0	2.0 - 18.0			+3 +6 +9		H [+7 to +10] K [+10 to +13] A [+13 to +16]
Input Two-Tone Third Order [dBm]	2.0 - 18.0	2.0 - 18.0			+3 +6 +9		H [+7 to +10] K [+10 to +13] A [+13 to +16]

Notes:

- Mixer Conversion Loss tested with IF frequency of 100 MHz.
- Maximum input power is +23 dBm @ +25°C, derated linearly to +20 dBm @ +100°C.

## Typical Mixer Performance



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