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## **HMC141/142 MIXER OPERATION NOTE**

### ***RF & LO Port Designations for the HMC141 and HMC142 Double-Balanced Mixers***

Although the mixers operate acceptably when RF & LO ports are interchanged, use the following guidelines for best performance.

#### ***Downconverter Operation***

Use the Datasheet Outline Drawing (DOD) to determine port designation for typical downconverter performance per the HMC141/142 data sheet.

- Apply RF Input to RF Port so labelled on DOD and on MMIC die.
- Apply LO Input to LO Port so labelled on DOD and on MMIC die.
- Access IF Output at IF Port so labelled on DOD and on MMIC die.

#### ***Upconverter Operation***

Reverse the port designation specified by the Datasheet Outline Drawing (DOD) for typical upconverter performance per the HMC141/142 data sheet on page 4-14.

- Apply IF Input to IF Port so labelled on DOD and on MMIC die.
- Apply LO Input to RF Port so labelled on DOD and on MMIC die.
- Access RF Output at LO Port so labelled on DOD and on MMIC die.