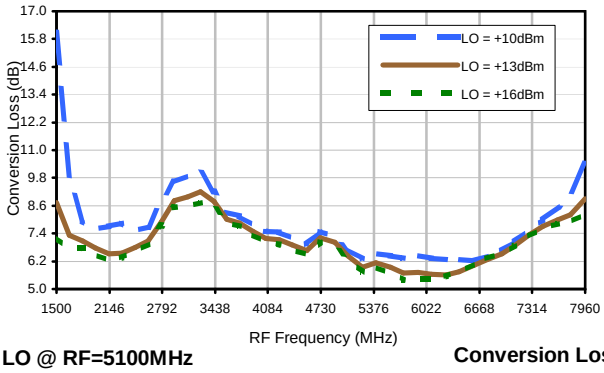
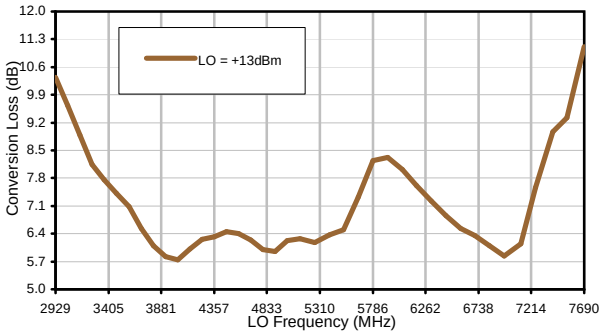
# Frequency Mixer ALY-ED5505/1

## *Typical Performance Curves*

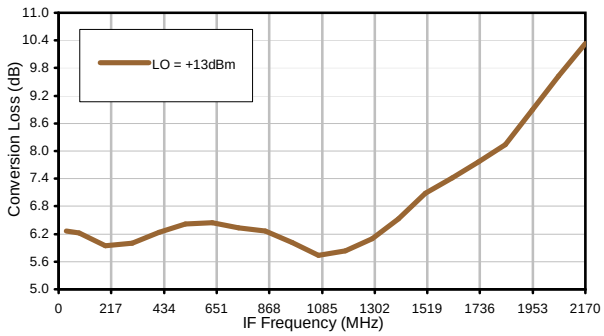
**Conversion Loss @ IF=30MHz**



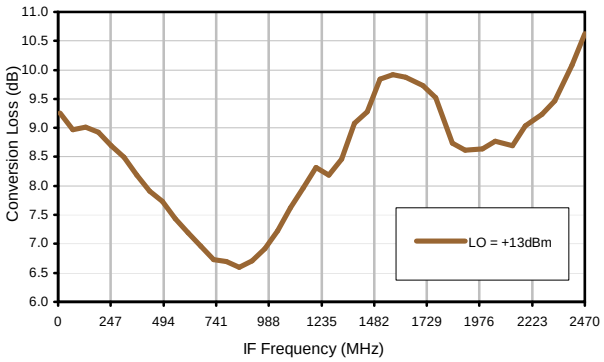

**Conversion Loss vs. LO @ RF=5100MHz**



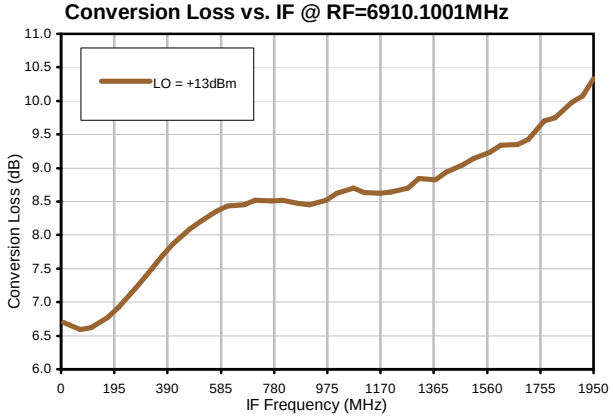

**Conversion Loss vs. IF @ RF=5100MHz**



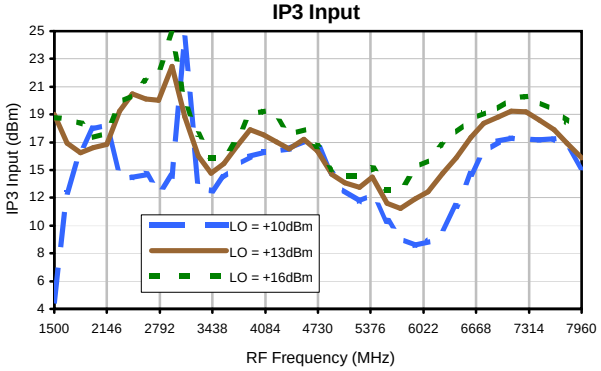

**Conversion Loss vs. IF @ RF=3289.8999MHz**



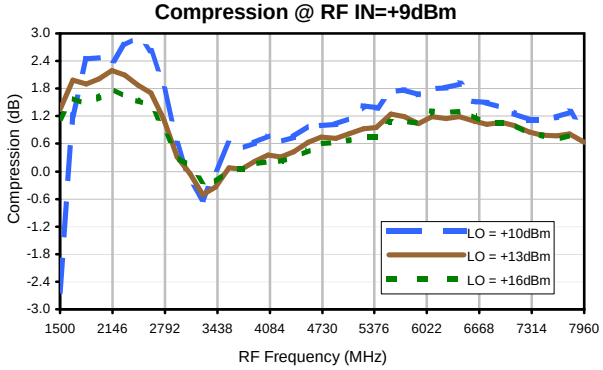

**Conversion Loss vs. IF @ RF=6910.1001MHz**




**IP3 Input**

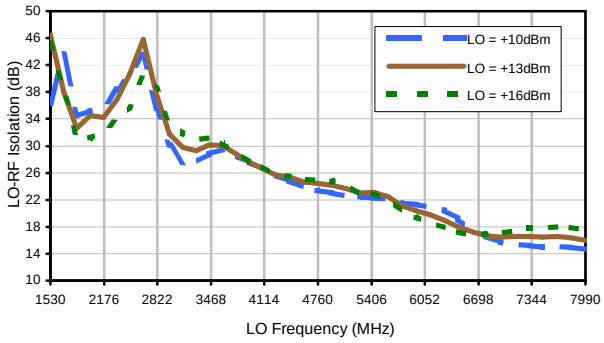



**Compression @ RF IN=+9dBm**

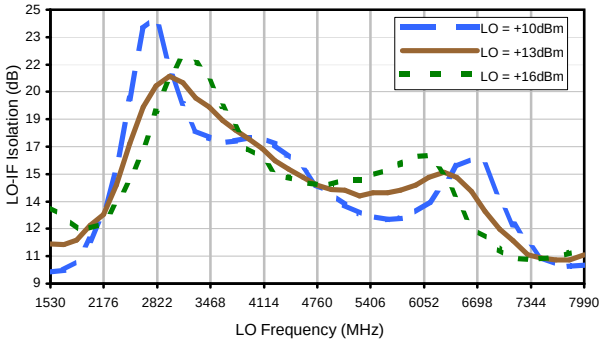


## *Typical Performance Curves*

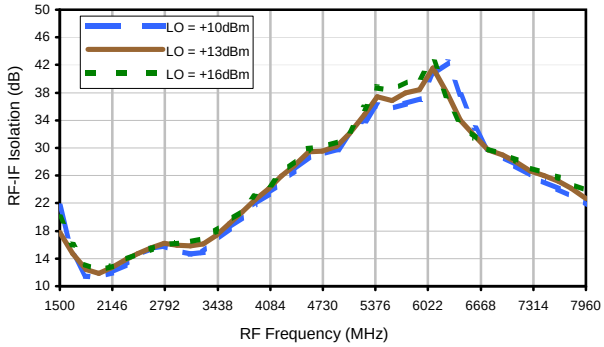
**LO-RF Isolation**



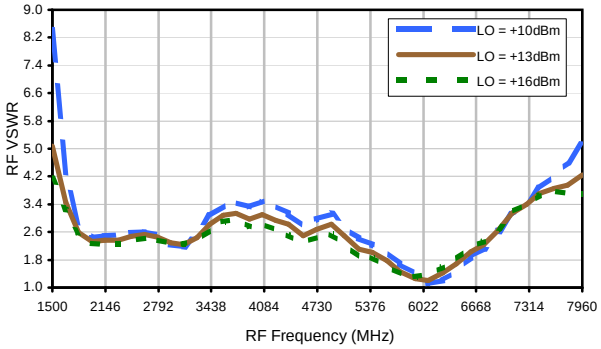

**LO-IF Isolation**



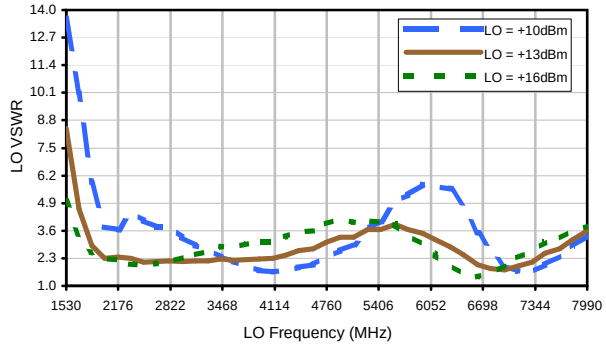

**RF-IF Isolation**



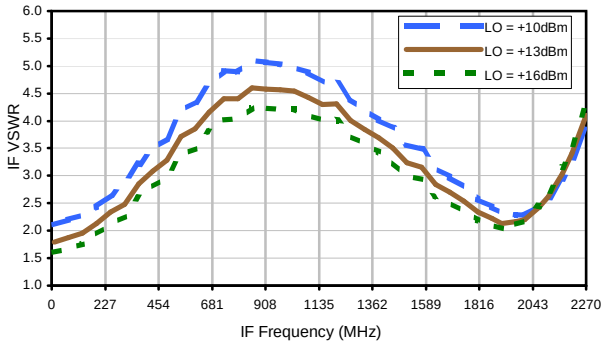

**RF VSWR**




**LO VSWR**




**IF VSWR**



## *Harmonics Tables*

| RF HARMONICS ORDER | (-dBm) | (-dBc) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | - | - | +11 | 20 | 7 | 40 | --- | --- | --- | --- | --- | --- |
| 1 | - | 26 | +0 | 37 | 23 | 52 | 59 | --- | --- | --- | --- | --- |
| 2 | 76 | 52 | 49 | 44 | 50 | 54 | 45 | 55 | --- | --- | --- | --- |
| 3 | >90 | 77 | 63 | >78 | 64 | 75 | 70 | 76 | >78 | --- | --- | --- |
| 4 | >90 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | --- | --- |
| 5 | --- | --- | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | --- |
| 6 | --- | --- | --- | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 |
| 7 | --- | --- | --- | --- | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 |
| 8 | --- | --- | --- | --- | --- | >78 | >78 | >78 | >78 | >78 | >78 | >78 |
| 9 | --- | --- | --- | --- | --- | --- | >78 | >78 | >78 | >78 | >78 | >78 |
| 10 | --- | --- | --- | --- | --- | --- | --- | >78 | >78 | >78 | >78 | >78 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**LO HARMONICS ORDER**

**Test conditions:** **RF IN: 5100 MHz; -6.00 dBm.**
**LO IN: 5130 MHz; +13.00 dBm**
**IF OUT: 30 MHz; -11.95 dBm**

| RF HARMONICS ORDER | (-dBm) | (-dBc) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | - | - | +1 | 29 | 19 | 51 | --- | --- | --- | --- | --- | --- |
| 1 | - | 26 | +0 | 39 | 23 | 50 | 60 | --- | --- | --- | --- | --- |
| 2 | 56 | 44 | 40 | 32 | 42 | 51 | 40 | 54 | --- | --- | --- | --- |
| 3 | 80 | 58 | 43 | 60 | 39 | 56 | 51 | 63 | 63 | --- | --- | --- |
| 4 | >90 | 65 | 63 | 56 | 72 | 59 | 69 | 59 | 64 | 66 | --- | --- |
| 5 | --- | --- | 77 | 81 | 79 | 85 | 62 | 78 | 67 | 75 | 66 | --- |
| 6 | --- | --- | --- | 81 | 78 | 71 | 77 | 80 | 72 | 82 | 66 | 85 |
| 7 | --- | --- | --- | --- | >88 | >88 | 82 | >88 | 80 | 87 | 76 | 75 |
| 8 | --- | --- | --- | --- | --- | >88 | >88 | >88 | >88 | 82 | 84 | 86 |
| 9 | --- | --- | --- | --- | --- | --- | >88 | >88 | >88 | >88 | 84 | >88 |
| 10 | --- | --- | --- | --- | --- | --- | --- | >88 | >88 | >88 | >88 | >88 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**LO HARMONICS ORDER**

**Test conditions:** **RF IN: 5100 MHz; 4.00 dBm.**
**LO IN: 5130 MHz; +13.00 dBm**
**IF OUT: 30 MHz; -2.04 dBm**

**Notes: 1. All Harmonics are in (dBc) relative to IF OUTPUT.**
**2. + entry denotes harmonics are in (dBc) above IF OUTPUT.**
**3. RF Cal represent the Harmonics level of the RF input signal to the mixer.**