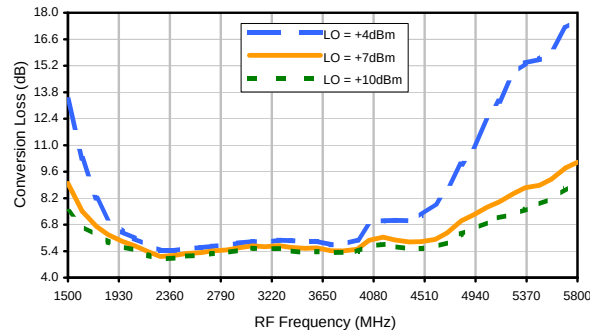


# Frequency Mixer

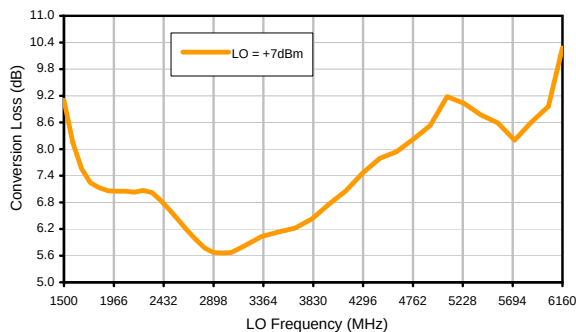
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## Typical Performance Curves

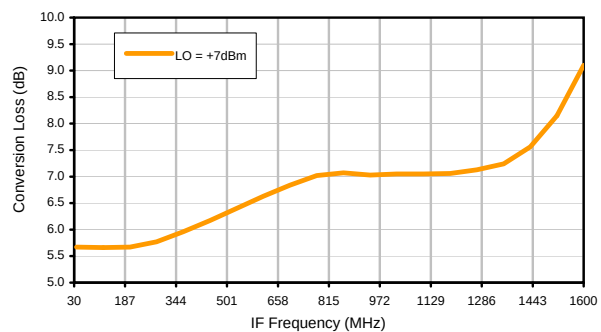
Conversion Loss @ IF=30MHz



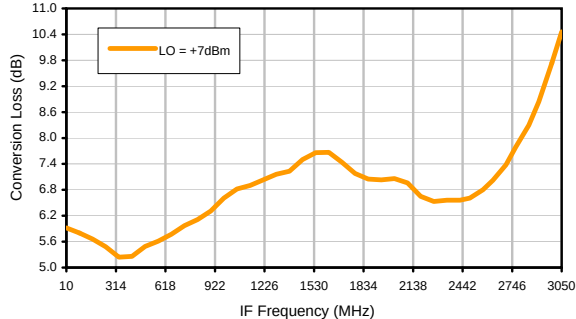
Conversion Loss vs. LO @ RF=3100MHz



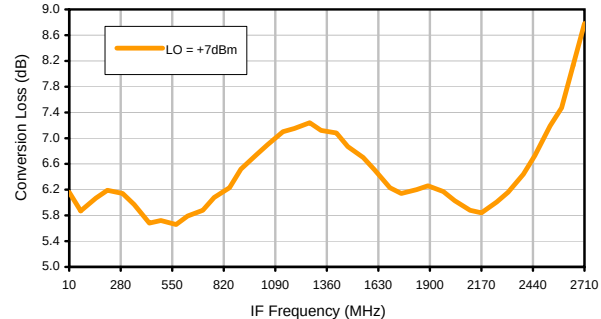
Conversion Loss vs. IF @ RF=3100MHz



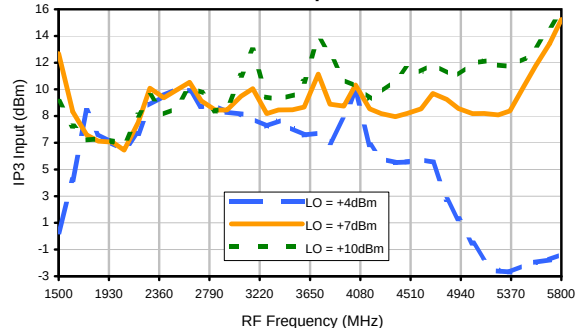
Conversion Loss vs. IF @ RF=1989.9MHz



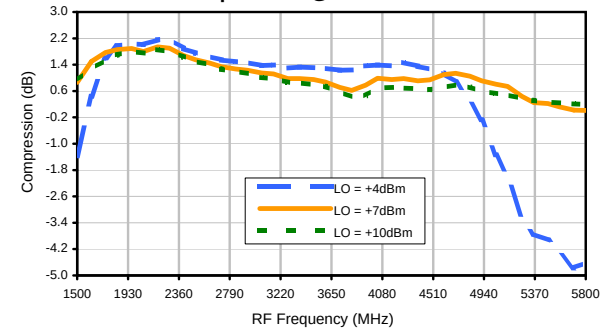
Conversion Loss vs. IF @ RF=4210.1MHz



IP3 Input



Compression @ RF IN=+1dBm



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REV. X3

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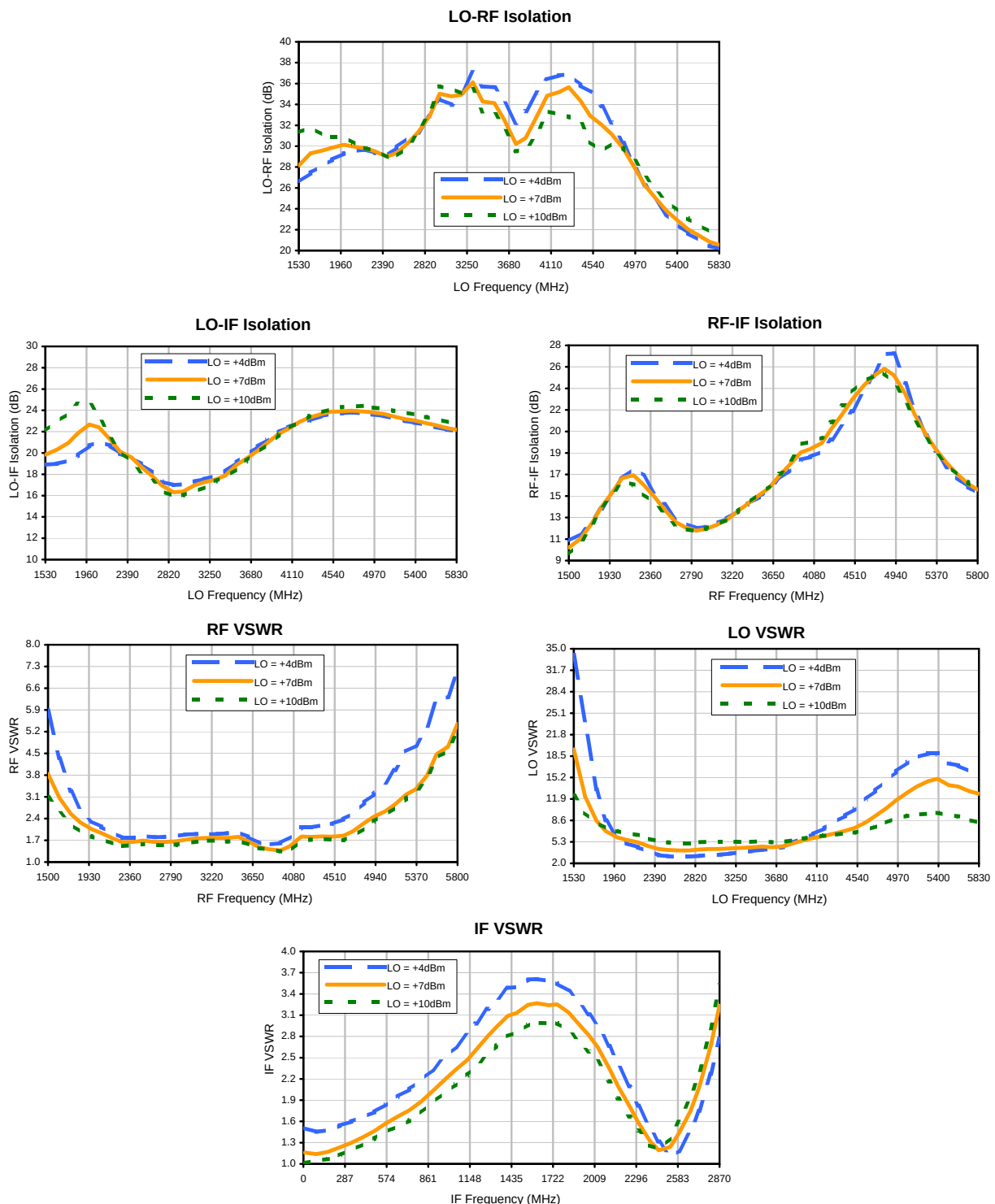
101031

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# Frequency Mixer

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## Typical Performance Curves



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# Frequency Mixer

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## Harmonics Tables

RF HARMONICS ORDER

|    | (-dBm) | (-dBc) |     |     |     |     |     |     |     |     |     |     |
|----|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0  | -      | -      | +9  | 28  | 7   | 23  | 27  | 48  | 34  | --- | --- | --- |
| 1  | -      | 7      | +0  | 19  | 42  | 30  | 42  | 47  | 63  | 60  | --- | --- |
| 2  | 78     | 63     | 45  | 41  | 42  | 60  | 41  | >70 | >70 | 63  | 65  | --- |
| 3  | >90    | 62     | >70 | 58  | 60  | 65  | >70 | 60  | 66  | >70 | >70 | >70 |
| 4  | >90    | >70    | >70 | >70 | >70 | 70  | >70 | >70 | 69  | >70 | >70 | >70 |
| 5  | >90    | >70    | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 6  | >90    | >70    | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 7  | >90    | >70    | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 8  | ---    | ---    | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 9  | ---    | ---    | --- | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 10 | ---    | ---    | --- | --- | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
|    | RF CAL | 0      | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |

Test conditions: RF IN: 3100 MHz; -14.00 dBm.  
LO IN: 3130 MHz; +7.00 dBm  
IF OUT: 30 MHz; -19.67 dBm

RF HARMONICS ORDER

|    | (-dBm) | (-dBc) |     |     |     |     |     |     |     |     |     |     |
|----|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0  | -      | -      | +0  | 41  | 17  | 33  | 43  | 62  | 46  | --- | --- | --- |
| 1  | -      | 7      | +0  | 20  | 43  | 35  | 51  | 55  | 67  | 70  | --- | --- |
| 2  | 66     | 59     | 40  | 38  | 35  | 56  | 39  | 56  | 54  | 66  | 61  | --- |
| 3  | >90    | 41     | 66  | 40  | 41  | 46  | 68  | 51  | 59  | 67  | 69  | 70  |
| 4  | >90    | 66     | 56  | 74  | 52  | 46  | 53  | 69  | 49  | >80 | 78  | 70  |
| 5  | >90    | 77     | 70  | >80 | >80 | 59  | 65  | 72  | >80 | 62  | 71  | 73  |
| 6  | >90    | >80    | >80 | >80 | 72  | >80 | 67  | 59  | 73  | >80 | 61  | 79  |
| 7  | >90    | >80    | >80 | >80 | >80 | >80 | >80 | 75  | 75  | >80 | >80 | 71  |
| 8  | ---    | ---    | >80 | >80 | >80 | >80 | >80 | >80 | 79  | 74  | >80 | >80 |
| 9  | ---    | ---    | --- | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 |
| 10 | ---    | ---    | --- | --- | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 |
|    | RF CAL | 0      | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |

### LO HARMONICS ORDER

Test conditions: RF IN: 3100 MHz; -4.00 dBm.  
LO IN: 3130 MHz; +7.00 dBm  
IF OUT: 30 MHz; -9.8 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.