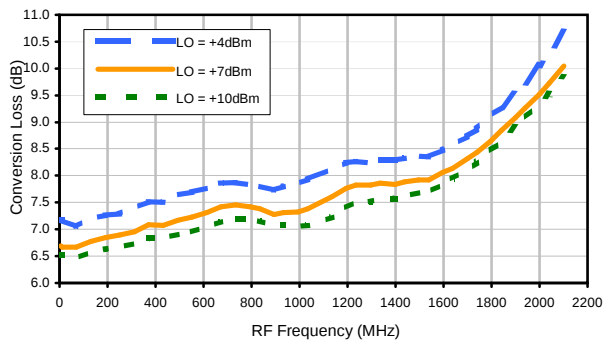


# Frequency Mixer

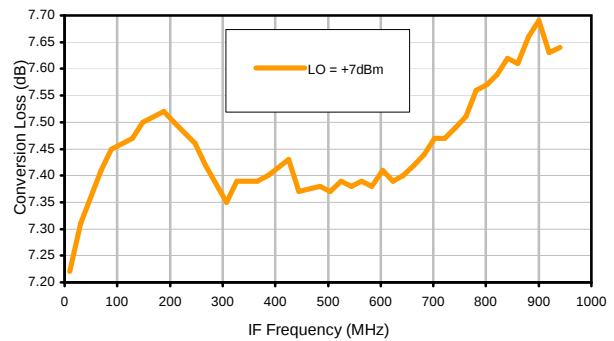
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## Typical Performance Curves

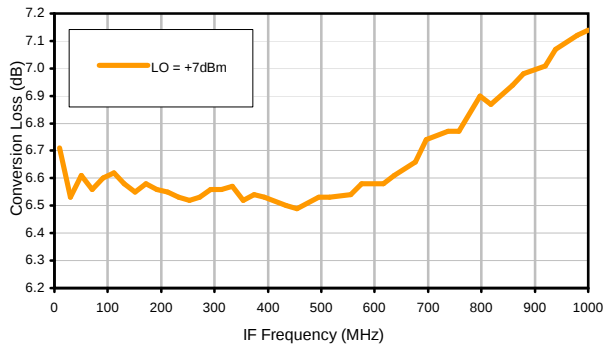
Conversion Loss @ IF=30MHz



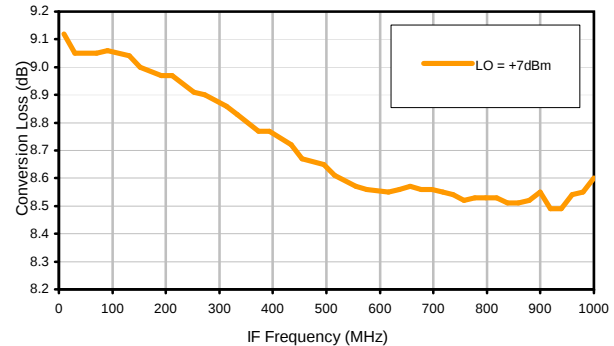
Conversion Loss vs. IF @ RF=950.1MHz



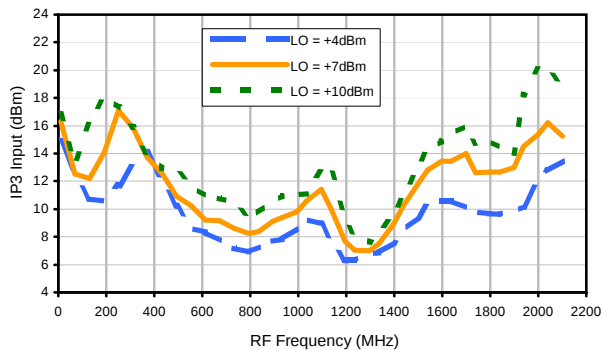
Conversion Loss vs. IF @ RF=10.1MHz



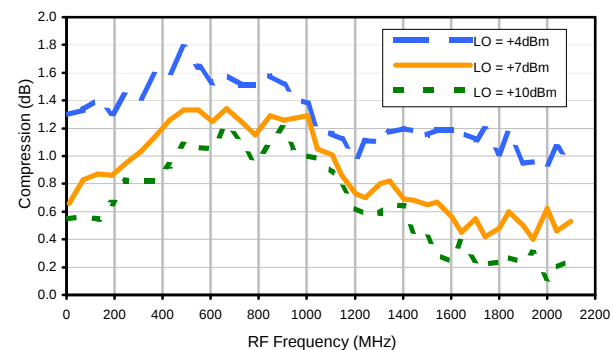
Conversion Loss vs. IF @ RF=1900.1MHz



IP3 Input



Compression @ RF IN=+1dBm



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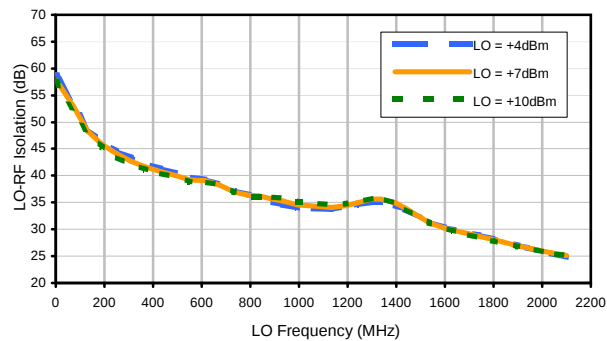


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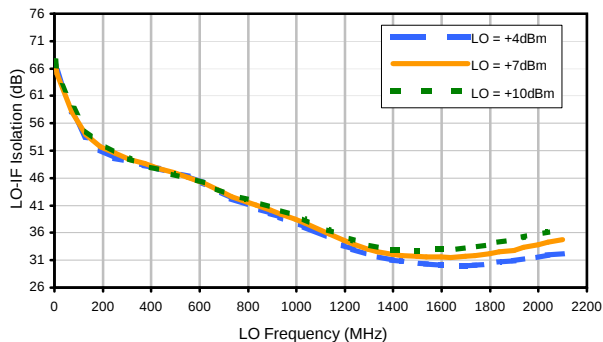


## Typical Performance Curves

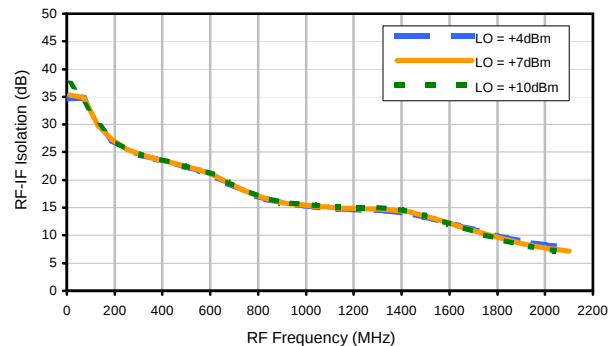
LO-RF Isolation



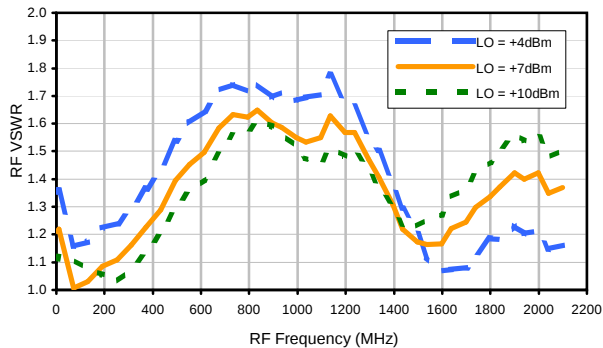
LO-IF Isolation



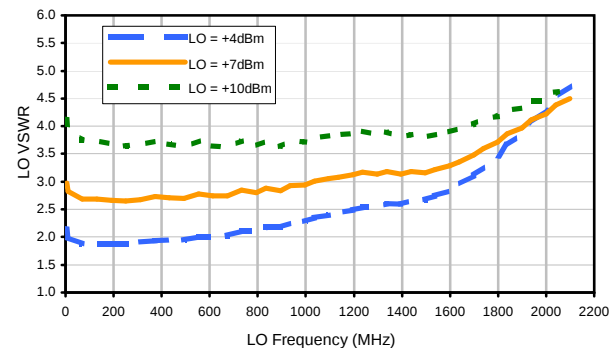
RF-IF Isolation



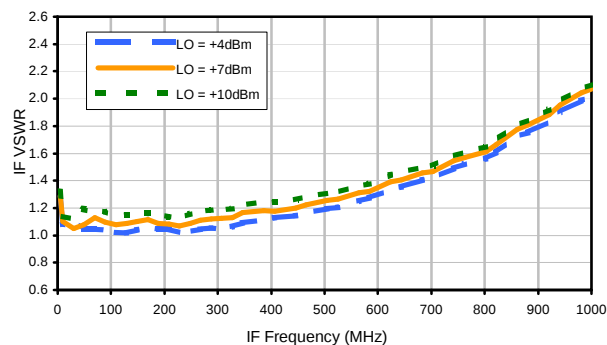
RF VSWR



LO VSWR



IF VSWR



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## Harmonics Tables

RF HARMONICS ORDER

|        | (-dBm) | (-dBc) |     |     |     |     |     |     |     |     |     |     |
|--------|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0      | -      | -      | 10  | 18  | 11  | 25  | 16  | 38  | 36  | 55  | 45  | 70  |
| 1      | -      | 8      | 0   | 30  | 19  | 26  | 28  | 27  | 46  | 44  | 54  | 47  |
| 2      | 110    | 61     | 54  | 51  | 55  | 64  | 53  | 56  | 46  | 99  | 58  | 74  |
| 3      | 113    | 59     | 61  | 76  | 56  | 82  | 66  | 59  | 66  | 62  | 74  | 72  |
| 4      | 117    | 90     | 87  | 86  | 85  | 82  | 88  | 100 | 84  | 83  | 76  | 93  |
| 5      | 116    | 89     | 98  | 89  | 90  | 93  | 81  | 94  | 93  | 84  | 89  | 92  |
| 6      | 116    | 102    | 101 | 98  | 105 | 118 | 93  | 87  | 99  | 102 | 96  | 106 |
| 7      | 112    | 107    | 108 | 99  | 109 | 108 | 105 | 103 | 89  | 95  | 97  | 98  |
| 8      | 111    | 94     | 106 | 114 | 104 | 102 | 107 | 110 | 98  | 83  | 102 | 104 |
| 9      | 117    | 101    | 93  | 104 | 101 | 105 | 97  | 103 | 98  | 93  | 89  | 100 |
| 10     | 112    | 101    | 103 | 95  | 108 | 106 | 105 | 101 | 107 | 103 | 93  | 89  |
| RF CAL | 0      | 1      | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |     |

### LO HARMONICS ORDER

Test conditions:

RF IN: 950.1 MHz; -14.00 dBm.

LO IN: 980.01 MHz; +7.00 dBm

IF OUT: 29.91 MHz; -21.95 dBm

RF HARMONICS ORDER

|        | (-dBm) | (-dBc) |     |     |    |     |    |     |    |    |    |     |
|--------|--------|--------|-----|-----|----|-----|----|-----|----|----|----|-----|
| 0      | -      | -      | 20  | 28  | 22 | 39  | 31 | 52  | 56 | 67 | 57 | 75  |
| 1      | -      | 8      | 0   | 30  | 19 | 30  | 30 | 32  | 52 | 54 | 69 | 68  |
| 2      | 90     | 54     | 48  | 44  | 52 | 55  | 46 | 54  | 41 | 64 | 59 | 76  |
| 3      | 115    | 42     | 44  | 59  | 41 | 56  | 66 | 43  | 51 | 45 | 63 | 61  |
| 4      | 115    | 74     | 74  | 71  | 62 | 58  | 62 | 71  | 68 | 62 | 54 | 76  |
| 5      | 112    | 78     | 75  | 72  | 62 | 68  | 53 | 67  | 61 | 58 | 63 | 61  |
| 6      | 108    | 93     | 80  | 89  | 94 | 90  | 75 | 73  | 74 | 87 | 82 | 73  |
| 7      | 118    | 91     | 93  | 81  | 83 | 82  | 77 | 82  | 68 | 79 | 80 | 69  |
| 8      | 103    | 119    | 96  | 100 | 89 | 95  | 90 | 93  | 84 | 81 | 82 | 108 |
| 9      | 112    | 101    | 115 | 102 | 99 | 89  | 91 | 92  | 88 | 91 | 80 | 89  |
| 10     | 112    | 109    | 98  | 111 | 99 | 104 | 95 | 110 | 97 | 95 | 94 | 90  |
| RF CAL | 0      | 1      | 2   | 3   | 4  | 5   | 6  | 7   | 8  | 9  | 10 |     |

### LO HARMONICS ORDER

Test conditions:

RF IN: 950.1 MHz; -4.00 dBm.

LO IN: 980.01 MHz; +7.00 dBm

IF OUT: 29.91 MHz; -12.14 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.

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