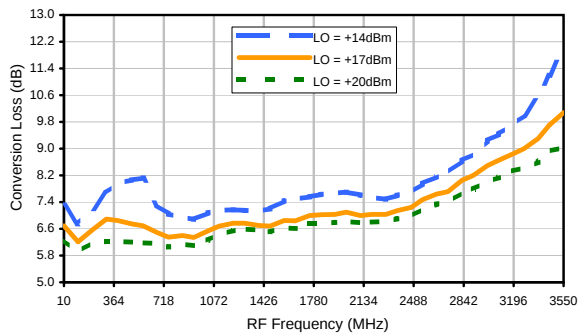


# Frequency Mixer

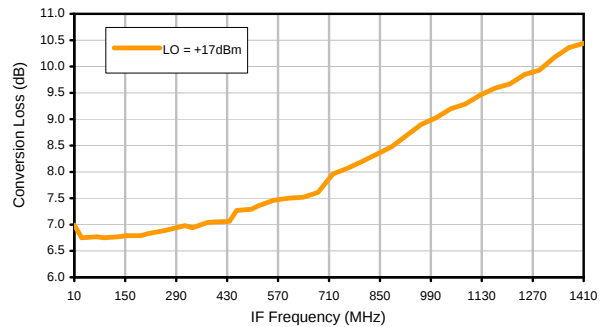
SYM-ED7158/1

## Typical Performance Curves

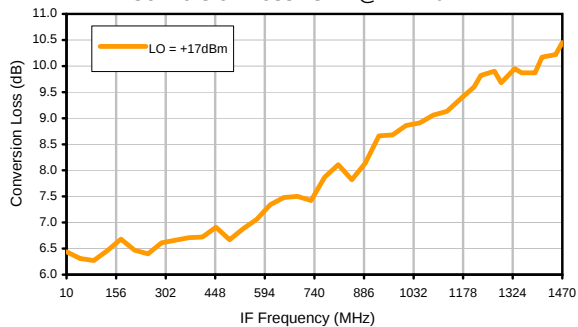
Conversion Loss @ IF=30MHz



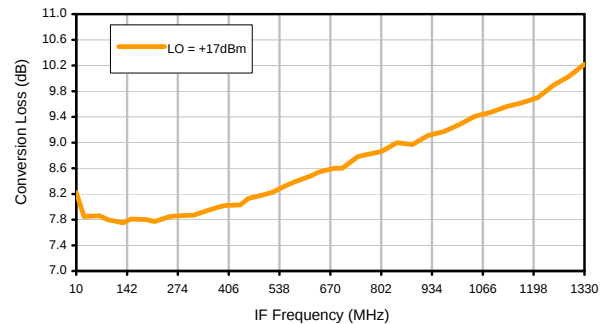
Conversion Loss vs. IF @ RF=1425.1MHz



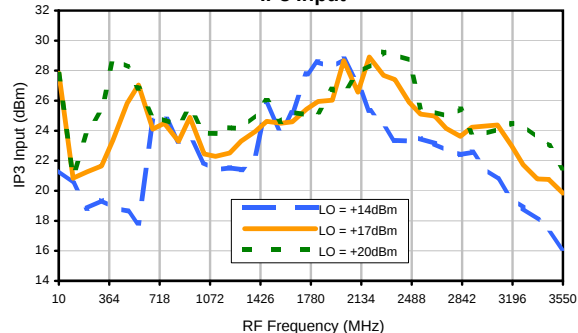
Conversion Loss vs. IF @ RF=10MHz



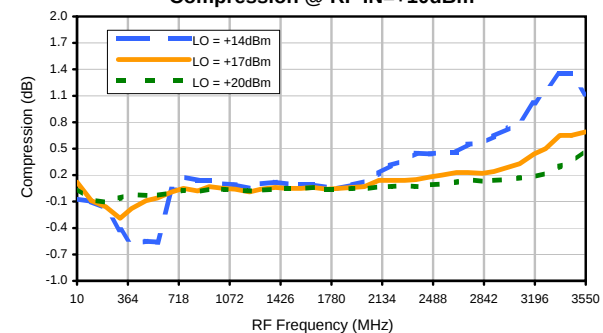
Conversion Loss vs. IF @ RF=2840.1MHz



IP3 Input



Compression @ RF IN=+10dBm

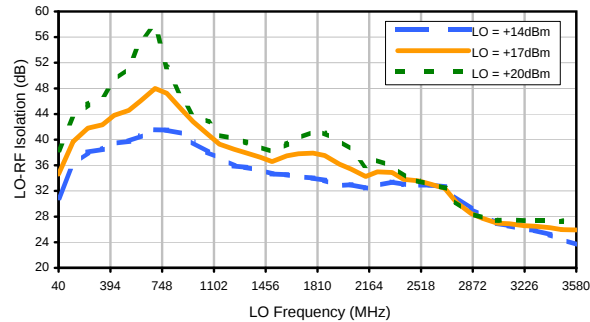


# Frequency Mixer

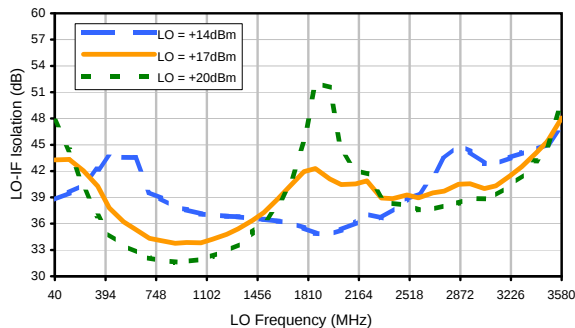
SYM-ED7158/1

## Typical Performance Curves

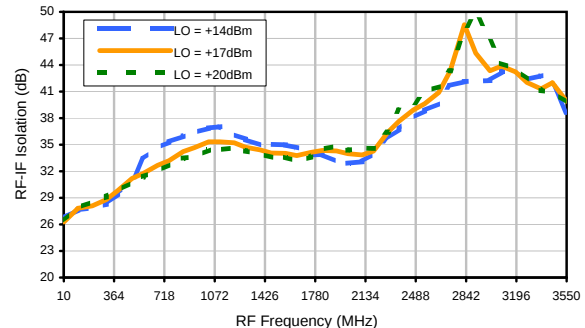
LO-RF Isolation



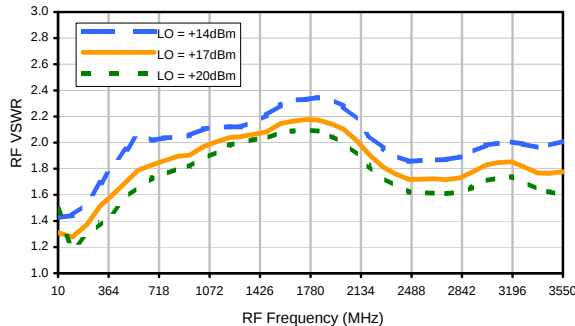
LO-IF Isolation



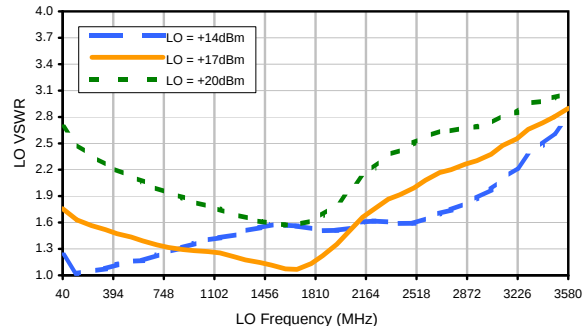
RF-IF Isolation



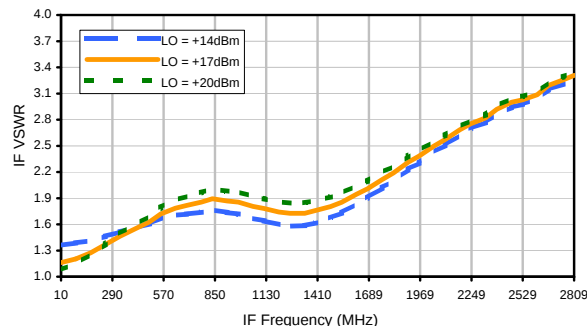
RF VSWR



LO VSWR



IF VSWR



# Frequency Mixer

SYM-ED7158/1

## Harmonics Tables

### RF HARMONICS ORDER

|    | (-dBm) | (-dBc) |     |     |     |     |     |     |     |     |     |     |
|----|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0  | -      | -      | 8   | 15  | 18  | 33  | 28  | 35  | 27  | 33  | 35  | 47  |
| 1  | -      | 27     | +0  | 38  | 19  | 46  | 22  | 44  | 53  | 70  | 46  | 44  |
| 2  | 65     | 70     | 61  | 65  | 65  | 77  | 68  | 75  | 65  | 74  | 61  | 65  |
| 3  | >90    | >78    | 72  | >78 | 70  | >78 | 76  | >78 | 76  | >78 | 77  | >78 |
| 4  | >90    | >78    | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 |
| 5  | >90    | >78    | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 |
| 6  | >90    | >78    | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 |
| 7  | >90    | >78    | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 |
| 8  | >90    | >78    | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 |
| 9  | >90    | >78    | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 |
| 10 | >90    | >78    | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 | >78 |
|    | RF CAL | 0      | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |

Test conditions: RF IN: 1420 MHz; -5.00 dBm.  
LO IN: 1450 MHz; +17.00 dBm  
IF OUT: 30 MHz; -12.25 dBm

### RF HARMONICS ORDER

|    | (-dBm) | (-dBc) |     |     |     |     |     |     |     |     |     |     |
|----|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0  | -      | -      | 18  | 25  | 29  | 43  | 39  | 47  | 39  | 47  | 48  | 66  |
| 1  | -      | 27     | +0  | 38  | 19  | 47  | 22  | 45  | 54  | 72  | 50  | 46  |
| 2  | 45     | 60     | 52  | 54  | 56  | 78  | 58  | 65  | 59  | 66  | 55  | 59  |
| 3  | >90    | 66     | 52  | 68  | 51  | 76  | 57  | 70  | 56  | 82  | 59  | 81  |
| 4  | >90    | 81     | 81  | 78  | 74  | 77  | 76  | 83  | 79  | 84  | 72  | >88 |
| 5  | >90    | >88    | 88  | >88 | 80  | >88 | 72  | >88 | 76  | >88 | 73  | 85  |
| 6  | >90    | >88    | >88 | >88 | >88 | >88 | >88 | 88  | >88 | >88 | >88 | >88 |
| 7  | >90    | >88    | >88 | >88 | >88 | >88 | >88 | >88 | >88 | >88 | >88 | >88 |
| 8  | >90    | >88    | >88 | >88 | >88 | >88 | >88 | >88 | >88 | >88 | >88 | >88 |
| 9  | >90    | >88    | >88 | >88 | >88 | >88 | >88 | >88 | >88 | >88 | >88 | >88 |
| 10 | >90    | >88    | >88 | >88 | >88 | >88 | >88 | >88 | >88 | >88 | >88 | >88 |
|    | RF CAL | 0      | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |

Test conditions: RF IN: 1420 MHz; 5.00 dBm.  
LO IN: 1450 MHz; +17.00 dBm  
IF OUT: 30 MHz; -2.2 dBm

### LO HARMONICS ORDER

- 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.

