# Up Converter
# Frequency Mixer

# ZX05-U712H-S+

## Level 17 (LO Power +17 dBm) 10 to 7100 MHz

*Generic photo used for illustration purposes only*

CASE STYLE: FL905

| Connectors | Model |
|---|---|
| **SMA** | ZX05-U712H-S+ |

***+RoHS Compliant***

*The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications*

### Maximum Ratings

| | |
|---|---|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| IF Power | 100mW |

Permanent damage may occur if any of these limits are exceeded.

### Coaxial Connections

| | |
|---|---|
| LO | 1 |
| IF (IN) | 2 |
| RF (OUT) | 3 |

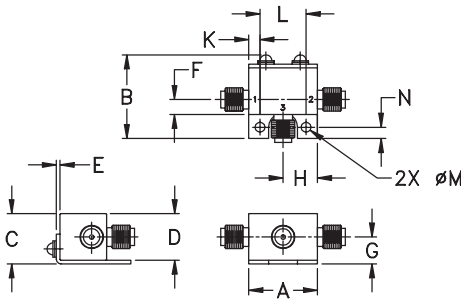
### Features

- up converter mixer
- low conversion loss, 7.5 dB typ.
- high IP3, 27 dBm typ.
- rugged construction
- small size
- protected by US patents, 6,790,049 and 7,027,795

### Applications

- cellular infrastructure
- WIMAX
- line-of-sight links
- wide band receivers
- bluetooth

### Outline Drawing




### Outline Dimensions ( inch / mm )

| A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| .74 | .90 | .54 | .50 | .04 | .16 | .29 |
| 18.80 | 22.86 | 13.72 | 12.70 | 1.02 | 4.06 | 7.37 |

| H | J | K | L | M | N | wt |
|---|---|---|---|---|---|---|
| .37 | -- | .122 | .496 | .106 | .122 | grams |
| 9.40 | -- | 3.10 | 12.60 | 2.69 | 3.10 | 20.0 |

### Electrical Specifications

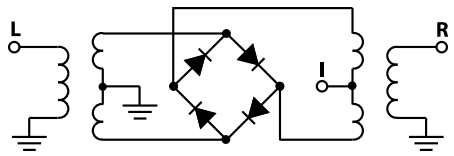
| FREQUENCY (MHz) | | | CONVERSION LOSS* (dB) | | | LO-IF (IN) ISOLATION (dB) | | LO-RF (OUT) ISOLATION (dB) | | IP3 at center band (dBm) |
|---|---|---|---|---|---|---|---|---|---|---|
| IF (IN) | LO | RF (OUT) | Typ. | σ** | Max. | Typ. | Min. | Typ. | Min. | Typ. |
| 2600-7100 | 10-1780 | 2600-7100 | 7.5 | 0.3 | 9.2 | 30 | 17 | 24 | 15 | 27 |

1 dB COMPR. +14 dBm typ.
* Conversion Loss at 30 MHz LO
** σ is a standard deviation

### Typical Performance Data

| Frequency (MHz) | | | Conversion Loss (dB) | VSWR RF Port (:1) | Frequency (MHz) | Isolation L-I (dB) | Isolation L-R (dB) | VSWR LO Port (:1) |
|---|---|---|---|---|---|---|---|---|
| IF (IN) | LO | RF (OUT) | LO +17dBm | LO +17dBm | | LO +17dBm | LO +17dBm | LO +17dBm |
| 2600.10 | 30.00 | 2630.10 | 7.83 | 1.32 | 10.10 | 69.72 | 54.09 | 1.33 |
| 2800.10 | 30.00 | 2830.10 | 7.15 | 1.47 | 100.10 | 51.66 | 38.75 | 1.32 |
| 3000.10 | 30.00 | 3030.10 | 6.97 | 1.61 | 200.10 | 45.94 | 34.10 | 1.38 |
| 3400.10 | 30.00 | 3430.10 | 7.08 | 2.07 | 300.10 | 41.85 | 31.17 | 1.48 |
| 3600.10 | 30.00 | 3630.10 | 7.22 | 2.23 | 400.10 | 39.69 | 28.59 | 1.60 |
| 3800.10 | 30.00 | 3830.10 | 7.51 | 2.42 | 500.10 | 37.41 | 26.06 | 1.62 |
| 4000.10 | 30.00 | 4030.10 | 7.43 | 2.55 | 600.10 | 35.37 | 24.40 | 1.62 |
| 4400.10 | 30.00 | 4430.10 | 7.48 | 2.77 | 700.10 | 34.28 | 22.62 | 1.63 |
| 4600.10 | 30.00 | 4630.10 | 7.18 | 2.72 | 800.10 | 32.48 | 21.55 | 1.67 |
| 4800.10 | 30.00 | 4830.10 | 7.28 | 2.65 | 900.10 | 31.01 | 21.20 | 1.80 |
| 5000.10 | 30.00 | 5030.10 | 7.20 | 2.62 | 1000.10 | 30.18 | 21.05 | 1.97 |
| 5200.10 | 30.00 | 5230.10 | 7.40 | 2.57 | 1100.10 | 28.34 | 20.83 | 2.20 |
| 5400.10 | 30.00 | 5430.10 | 7.53 | 2.46 | 1200.10 | 27.15 | 20.30 | 2.41 |
| 5600.10 | 30.00 | 5630.10 | 7.76 | 2.40 | 1300.10 | 26.11 | 19.80 | 2.56 |
| 5800.10 | 30.00 | 5830.10 | 7.81 | 2.16 | 1400.10 | 24.55 | 19.67 | 2.67 |
| 6000.10 | 30.00 | 6030.10 | 7.83 | 1.96 | 1500.10 | 23.55 | 19.71 | 2.76 |
| 6200.10 | 30.00 | 6230.10 | 7.55 | 1.73 | 1600.10 | 22.84 | 19.33 | 2.93 |
| 6400.10 | 30.00 | 6430.10 | 7.33 | 1.58 | 1700.10 | 21.54 | 18.71 | 3.00 |
| 6600.10 | 30.00 | 6630.10 | 7.09 | 1.59 | 1720.10 | 21.24 | 18.63 | 3.06 |
| 7100.10 | 30.00 | 7130.10 | 7.37 | 1.80 | 1780.10 | 20.77 | 18.34 | 3.08 |

### Electrical Schematic




Notes
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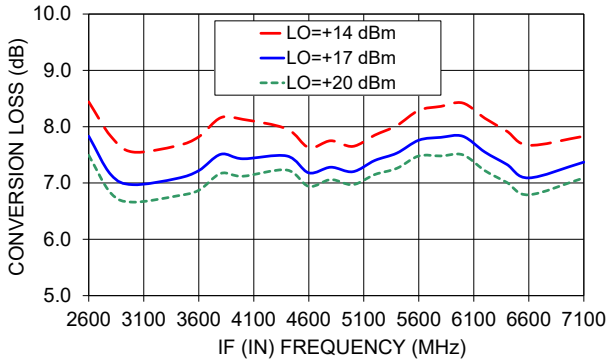
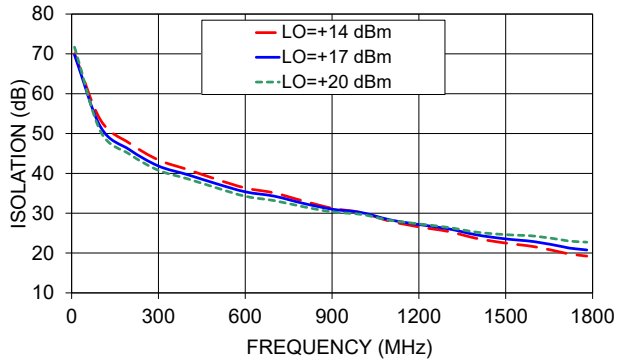
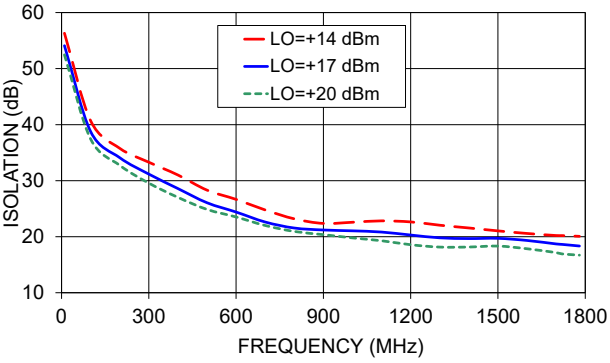
ZX05-U712H-S+
CONVERSION LOSS



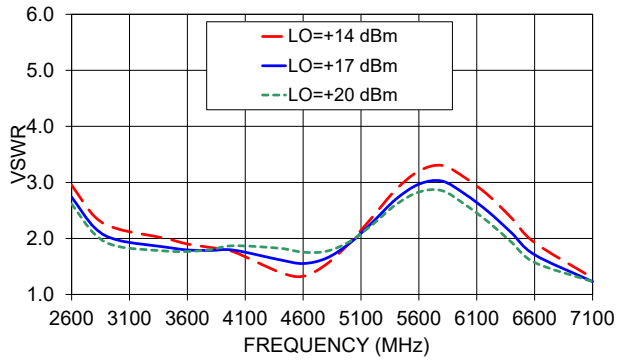

ZX05-U712H-S+
L-I (IN) ISOLATION



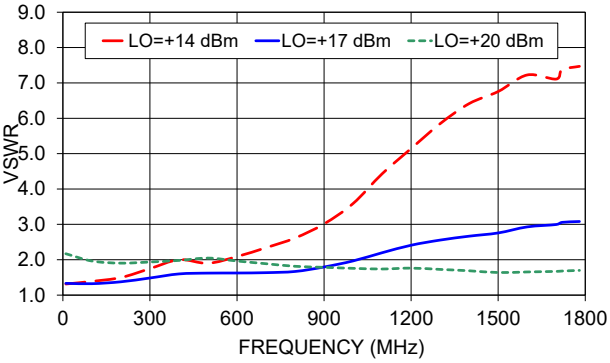

ZX05-U712H-S+
L-R (OUT) ISOLATION



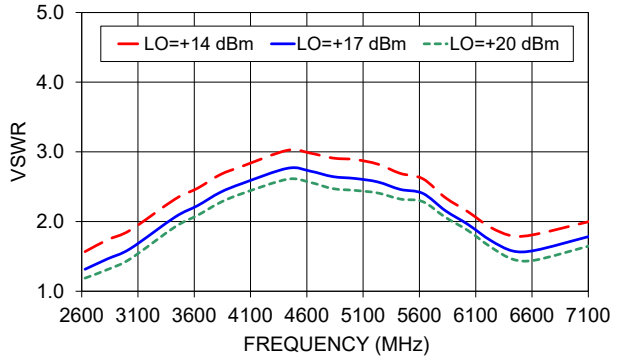

ZX05-U712H-S+
IF (IN) VSWR



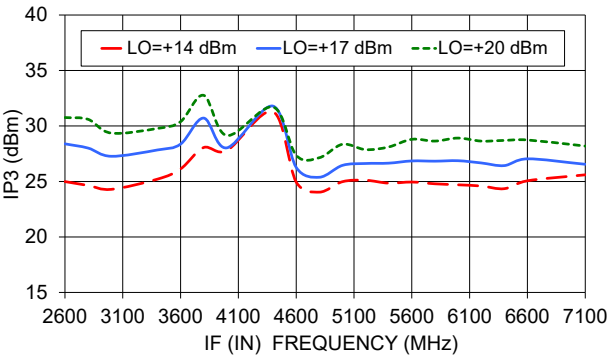

ZX05-U712H-S+
LO VSWR




ZX05-U712H-S+
RF (OUT) VSWR




ZX05-U712H-S+
IP3

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