## Product Data Sheet

ZC78

## ZC78 Millimeter-Wave Converters

Part-No.: 3626.5356.02

## Product Description

## Key Features:

- variable output power
- wide dynamic range
- wide frequency range
- highly stable measurement
- convenient handling



## Radiometer Physics

## Product Data Sheet

| Technical Specifications |  |
| :---: | :---: |
| Test Port |  |
| Frequency Range [GHz] | 53 to 78 |
| Port Type | WR3.6 x1.8 (UG387/U flange compatible) |
| Output Power [ dBm (typ.)] | >+6, +12 dBm (typ.) |
| Output Power Attenuation [dB] | 0 to 40 |
| Input Power Damage Level [dBm] | +20 |
| Stability (Magnitude [dB] / Phase [ ${ }^{\circ}$ ] (typ.) ) | typ. $<0.2 \mathrm{~dB}$ and typ. $<2^{\circ}$ |
| Source Input (RF IN) |  |
| Frequency Range [GHz] | 13.25 to 19.5 |
| Port Type | 2.92 mm , female |
| Input Power Range [dBm] | -15 to +10 |
| Local Oscillator Input (LO IN) |  |
| Frequency Range [GHz] | 8.83 to 13.00 |
| Port Type | SMA, female |
| Input Power Range [dBm]lnput Power Range [dBm] | +5 to +10 |
| Measurement Output (MEAS OUT) |  |
| Frequency Range [MHz] | 5 to 2000 |
| Port Type | SMA, female |
| Reference Output (REF OUT) |  |
| Frequency Range [MHz] | 5 to 2000 |
| Port Type | SMA, female |
| System Characteristics |  |
| Source match (without system error correction) | $>19 \mathrm{~dB}$ (n.trc. ${ }^{1}$, typ. $>30 \mathrm{~dB}$ |
| Directivity (without system error correction) | $>23 \mathrm{~dB}$ (n.trc. $)^{1}$, typ. >37 dB |
| Dynamic Range [dB] | > 100, typ. 115 |

Dynamic range is defined as the difference between the data trace of the transmission magnitude with maximum test port output power and both test ports through-connected on the one hand and the RMS value of the data trace of the transmission magnitude produced by noise and crosstalk with test ports short-circuited on the other. The specification is valid without system error correction and at 10 Hz measurement bandwidth. The dynamic range can be increased by using a measurement bandwidth of 1 Hz .
${ }^{1}$ Without consideration of measurement uncertainty.

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## Product Data Sheet

Typical Performance


Dynamic


