Typical Applications

- Reference Clock Multiplier
- Synthesizer Building Block
- EW
- ELINT
- SIGINT

Features

- Low Spurious less than -60 dBc
- Superior Phase Noise: -130 dBc/Hz @ 10 kHz
- Buffered Input
- High Output +7 dBm drive Level
- Integral Voltage Regulator
- Conduction Cooled
- Lightweight Aluminum Housing

General Description

The 310-027023-001 Multiplier is a x26 design providing the system designer with a compact, low phase noise building block for reference oscillator multiplication applications. A linear amplifier drives a step recovery diode thereby multiplying an input 100 MHz clock signal by a factor of 26.

A pair of selective 3-pole internal bandpass filters along with a pair of linear driver amplifiers help to offer deliver spurious response. The unit exhibits very little degradation of input reference signals, multiplying to the desired output frequency while only degrading the input phase noise performance by only 30 dB.

Typical Performance

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Typical Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Frequency</td>
<td>100 MHz</td>
</tr>
<tr>
<td>Input Level</td>
<td>+10 dBm ± 0.1 dB</td>
</tr>
<tr>
<td>Output Frequency</td>
<td>2600 MHz</td>
</tr>
<tr>
<td>Output Level</td>
<td>+17 dBm ± 2 dB</td>
</tr>
<tr>
<td>Spurious</td>
<td>-60 dBc</td>
</tr>
<tr>
<td>VSWR (Input)</td>
<td>2.0:1</td>
</tr>
<tr>
<td>Phase Noise Degradation</td>
<td>1.7 dB</td>
</tr>
<tr>
<td>DC Power</td>
<td>+12 volts / 500 mA</td>
</tr>
<tr>
<td>Temperature</td>
<td>-40 °C to +85 °C</td>
</tr>
</tbody>
</table>

All specifications above measured at +25 °C
Local Oscillator x26 Multiplier
100 MHz/2600 MHz
Model 310-027023-001

Multiplier Spectral Purity
Close Spectrum @ 25°C

Multiplier Spectral Purity
Wide Spectrum @ 25°C

Multiplier Spectral Purity
Close Spectrum @ -40°C

Multiplier Spectral Purity
Close Spectrum @ +85°C
Local Oscillator x26 Multiplier
100 MHz/2600 MHz
Model 310-027023-001

LO Input: J1
LO Output #1: J2

3.90" L x 1.50" W x 0.50" H excluding connectors

Chassis is machined aluminum with a silver plate finish and is non-hermetic.