

# TSA-219099

Broadband Applications

## 3U VPX Downconverter

### 24 – 40 GHz

Expand your system spectrum coverage with a single slot 3U converter

EXPORT RESTRICTIONS MAY APPLY



Covering a broad frequency range of 24-40 GHz, Teledyne Microwave Solutions 3U VPX Downconverter is ideally suited for airborne, shipboard and radar applications. This ruggedized unit offers excellent phase noise in a compact form factor. It offers long operational life and enhanced interoperability using a flexible open systems complaint architecture.

### Features

- Rugged & Compact
- Open Systems Compliant
- Excellent Phase Noise
- High Dynamic Range
- Built-in LO Generation

### High Dynamic Range

- RF Coverage: 24-40 GHz, 1 GHz IBW
- Noise Figure: 9 dB typical
- Phase Noise: 1 MHz @ -120 dBc/Hz
- Linear Dynamic Range: 90 dB (with 1 MHz BW)

### Built-in LO Generation

- Single-tone, internally generated spurious: -80 dBc (@-15 dBm input and max gain)
- Reference Frequency Input: 100 MHz

### Weight

- <500g rugged air-cooled

## Specifications

Parameter	Value
Format/Size	3U OpenVPX, single slot
Power	24 W Maximum
Control interface	RS-422 (consult factory for more options)
Weight	<500 g (rugged air-cooled)
Commercial and rugged air-cooled options	
<b>Down converter specifications</b>	
RF input coverage	24 GHz to 40 GHz
Noise figure	9 dB typical
Gain (typical RF to IF)	20 dB
Max RF (without damage)	20 dBm
OP1dB (with max gain)	8 dBm
OIP3 (with max gain)	21 dBm
Attenuation	30 dB in 0.5 dB steps
Linear dynamic range	90 dB (with 1 MHz BW)
Single-tone, signal related spurious	-45 dBc (@-15 dBm Input)
Single-tone, internally generated spurious	-80 dBc (@-15 dBm Input)
IF output center frequency	2 to 18 GHz
IF bandwidth	1.4 GHz to 2.4 GHz
IF band fatness	±3.0 dB typical
VSWR (In/out)	2:1
IF Rejection	-40 dBc
Image Rejection	-40 dBc
LO Leakage	-70 dBm typ
<b>LO generation specifications</b>	
Reference Frequency Input	100 MHz
Converter Composite Phase Noise (with 100 MHz Reference)	
100 Hz	-60 dBc/Hz
1 kHz	-75 dBc/Hz
10 kHz	-85 dBc/Hz
100 kHz	-100 dBc/Hz
1 MHz	-120 dBc/Hz
10 MHz	-135 dBc/Hz