

**SATCOM TRANSMITTER**

# Up-Converter

## Ka-band Up-Converter

### UC2300-70


**TYPICAL SPECIFICATIONS**
**[Frequency]**

<b>IF input frequency range</b>	70MHz
<b>Output frequency range</b>	22 – 24 GHz
<b>LO frequency</b>	22 – 24 GHz
<b>Conversion</b>	Dual Conversion without Inversion
<b>Frequency step size</b>	1KHz
<b>Frequency stability</b>	±1x10 <sup>-9</sup> /Day (Time) ±1x10 <sup>-8</sup> /Day (Temp)

**[IF input characteristics]**

<b>IF input bandwidth</b>	4MHz / 6MHz
<b>IF input damage level</b>	+10dBm Typical
<b>IF input connector</b>	SMA and BNC-female (50 Ohms)
<b>Input return Loss</b>	20dB min

**[RF output characteristics]**

<b>Output P1dB</b>	+9dBm
<b>Spurious</b>	
<b>Non-carrier</b>	-70dBm
<b>Carrier</b>	-60dBc @0dBm output
<b>Intermodulation</b>	-36dBc (2 Carriers) @0dBm output SCL
<b>Carrier mute</b>	-60dBc
<b>RF output connector</b>	SMK-female (50 Ohms)
<b>Output return Loss</b>	20dB min

**[LO input characteristics]**

<b>LO mode</b>	Internal or External Manually programmable setting via RF switch or GUI based selection
<b>External reference</b>	10MHz, -5 - +5 dBm
	In presence of external ref signal, the unit shall lock to the external ref automatically

<b>Phase noise</b>	-70dBc/Hz max @100Hz -80dBc/Hz max @1KHz -90dBc/Hz max @100KHz -95dBc/Hz max @1MHz -100dBc/Hz max @10MHz -110dBc/Hz max @100MHz
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**[Isolation]**

<b>LO-RF isolation</b>	50dB min
<b>LO-IF isolation</b>	50dB min
<b>RF-IF isolation</b>	50dB min

**[Transfer characteristics]**

<b>Gain adjust</b>	15 - 20 dB, 0.25dB step
<b>Gain stability</b>	±0.5dB/Day (Constant temperature)
<b>Gain flatness</b>	±0.5dB over 40MHz
<b>Gain slope</b>	0.05dB/MHz
<b>AM to PM conversion</b>	0.1 Deg/dB @ -5dBm output
<b>Group delay</b>	
<b>Linear</b>	0.03ns/MHz
<b>Parabolic</b>	0.01ns/MHz <sup>2</sup>
<b>Ripple</b>	1.0ns peak-to-peak

**[Front/Rear Panel]**

<b>Remote control (Rear Panel)</b>	TCP/IP (LAN) Serial (RS-232)
<b>Front Panel Indications (LCD)</b>	Output frequency, output power level, LO lock, Mute On/Off
<b>Monitoring ports (Front Panel)</b>	
<b>RF sample</b>	SMK-female, -10dBc
<b>LO sample</b>	SMK-female, -10dBc

**[Power]**

<b>Voltage</b>	230±10% VAC, with ON/OFF switch
<b>Frequency</b>	47 - 63 Hz
<b>Dissipation</b>	60Watts

**[Environmental]**

<b>Temperature</b>	0 - 50 Deg. C
<b>Altitude</b>	10,000 feet above MSL
<b>Humidity</b>	0 - 95% relative
<b>Physical size</b>	1RU, 19 inch rack mountable

## SATCOM TRANSMITTER

### OUTLINE DRAWING

