



S BAND 6 CHANNELS DOWN CONVERTER

- **LOW PHASE NOISE**
- **FINE FREQUENCY STEP**
- **LOW INTERMODULATION DISTORTION**
- **DUAL CONVERSION**
- **BUILT-IN HIGH STABILITY INTERNAL REFERENCE**
- **HIGH RELIABILITY**
- **REMOTE / MANUAL CONTROL**
- **PHASE COHERENT CHANNELS**

This high performance down converter is intended for use in professional applications in S band such as satellite earth stations. This device includes a double conversion downconverter modul with common low phase noise local oscillators, a microprocessor based monitor and control circuitry, a front panel with control keys and status display and own AC / DC power supply. The equipment can be controlled from the front panel (manual control) and via Ethernet (remote control) and serial interface (RS-232).

Electrical parameters

Input frequency range	2200 – 2300 MHz
Conversion Type	Dual conversion, without inversion,
Number of Channels	6 (independent), with common LO signals
Step Frequency	1 kHz
Output Frequency	70 MHz
Output Bandwidth	± 20 MHz min.
Number of Output Ports / Channel	2
Isolation between Output Ports on same channel	≥ 40 dB
Isolation between Input – Output ports on same channel	≥ 60 dB
Isolation between Output ports on two different channels	≥ 65dB
Impedance	50 Ω
VSWR	1.4 : 1 max
Local leakage	< -60 dBm
Image Rejection	≥ 60 dB
Output power level @ P _{1dB} compression point	+10 dBm
Gain	30 dB typ.
Gain Adjustment	30 dB range in 0.5 dB step
Noise Figure	< 10 dB @ maximum gain
Level Stability	±0.5 dB over 24 hrs @ constant temp
Phase unbalance between channels	≤ 5°
Gain unbalance between channels	≤ 1 dB
Phase Noise Parameters	
@ 100 Hz offset	-80dBc/Hz typ., -77dBc/Hz max.
@ 1 kHz offset	-95dBc/Hz typ., -90dBc/Hz max.
@ 10 kHz offset	-100dBc/Hz typ., -95dBc/Hz max.
Spurious Level	-60 dBc signal related
	-80 dBm signal independent



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Internal Reference Stability	better than $\pm 5 \cdot 10^{-8}$ over temperature
External Reference Frequency	5 MHz / 10 MHz, automatic selection
External Reference Signal Level	0 dBm \pm 6 dB typ.
External Reference Port Impedance	50 Ω
Reference Source	internal / external auto selection
M&C	frequency selection, 1 st and 2 nd local monitor and lock indication, channel gain adjustment, reference source, failures and alarms
Remote M&C Interface	TCP / IP on RJ-45 connector optional: RS-232 on 9-pin D-Sub connector
RF and IF Connector Type	N female (on rear panel)
Local Monitor Connector Type	SMA female (on front panel)
Supply Voltage	230 V AC \pm 10%, 47-53 Hz
Operating Ambient Temperature	+5°C...+45°C
Humidity	95% max (not condensing)
Construction	19" rack mountable, 3U height
Cooling	forced air
Finishing	Light Grey (RAL7035)

Outline drawing

