

Indoor X-band to 70MHz 2-channel Down Converter SCMDC61002NN10-RM

(Rev.01)

Features

- ◆ Two channels using common LOs, with two output ports per channel
- ◆ 8400 MHz to 8500 MHz input frequency range with 1 KHz step size
- ◆ 0-30 dB gain control range with 0.5 dB step size
- ◆ Monitoring & Controlling Via Ethernet
- ◆ Ext. 5/10/100 MHz reference auto Selection
- ◆ Int./Ext. reference auto selection
- ◆ Internal/External reference auto selection



RF Specifications

Specifications	2-channel Down Converter
No. of Channels	2
No. of Output	2 /Channel, 4 totally
Isolation between Outputs	50dB Min. for same channel; 60dB Min. for two different channels
No. of Input	2
Isolation between Inputs	60dB Min.
Conversion type	Dual conversion, no spectrum inversion
Frequency step size	1KHz
Input frequency	8400 – 8500 MHz
Output frequency	70MHz
Output 3-dB Bandwidth	+/-25MHz
LO Monitoring Interface	SMA female
Input / Output Interface	N type female
Input / Output Impedance	50 ohm
Input / output Return Loss	20dB MIN.
Ext Ref In	Internal/External Reference Auto Detection



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Frequency	5/10/100MHz Auto Detection
Level	-3 ~ +7dBm
Interface	BNC Female
Max Gain	30 dB
Gain adjustment	30dB, 0.5db step size
Gain flatness (full band)	+/-1dB Max.
Gain flatness (BW +/-25MHz)	+/-0.5 dB Max.
Output Level Stability	+/- 0.5 dB over day at constant temp.
Noise Figure	10 dB max. at max. gain; 12 dB typical at 10 dB lower gain
Image Rejection	60dB Min
Spurious (Signal related)	-60dBc Max.
Spurious (Out of IF band)	-90dBm Max.
LO Leakage	-80dBm Max.
Output P1dB	15dBm Min.
IM3	-60dBc @ 0dBm total power output.
Frequency stability	+/-10 ppb over operation temp.
Phase noise	
@ 100Hz offset	-80dBc/Hz Max.
@ 1kHz offset	-90dBc/Hz Max.
@ 10kHz offset	-98dBc/Hz Max.
@ 100kHz offset	-103dBc/Hz Max.
Group delay variation	
Linear	≤0.5 ns / MHz
Parabolic	≤0.1 ns / MHz
Ripple	≤1 ns p-p within ±5/10 MHz of center freq.



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Phase stability with temperature	≤ 5 deg. in the range of $22\pm 3^{\circ}\text{C}$
Group delay stability with temperature	≤ 2 ns. in the range $22\pm 3^{\circ}\text{C}$

Power Supply

Voltage	100~240 VAC, 47 ~ 53Hz
Power Consumption	50w Typ.

Environmental Conditions

Operating temperature	5°C to +45°C
Relative Humidity	Up to 95%

Mechanical

Dimensions	19" Rack Mountable 1U; Depth: 430mm Max.
Weight	3kg Typ.
Color	Light Grey

