Signal Distributor SDU-500

Features

- Extremely broad band
- Very high intercept points
- Low noise figure
- Compact units for rack mount
- 8 or 16 port versions
- HF/VHF and VHF/UHF versions
- Extremely rugged
- Meets military quality and environmental specifications

Product description

The unit is a high performance state of the art signal distributor based on advanced high-dynamic range signal routing and amplification technology. It could be used as antenna multicoupler or distributing any kind of signals in measurement or receiving systems in its operation range with high-dynamic range and low-distortion.

This signal routing unit reflect Sagax's ability to design and produce extremely broad band systems for surveillance and multiple frequency coverage.

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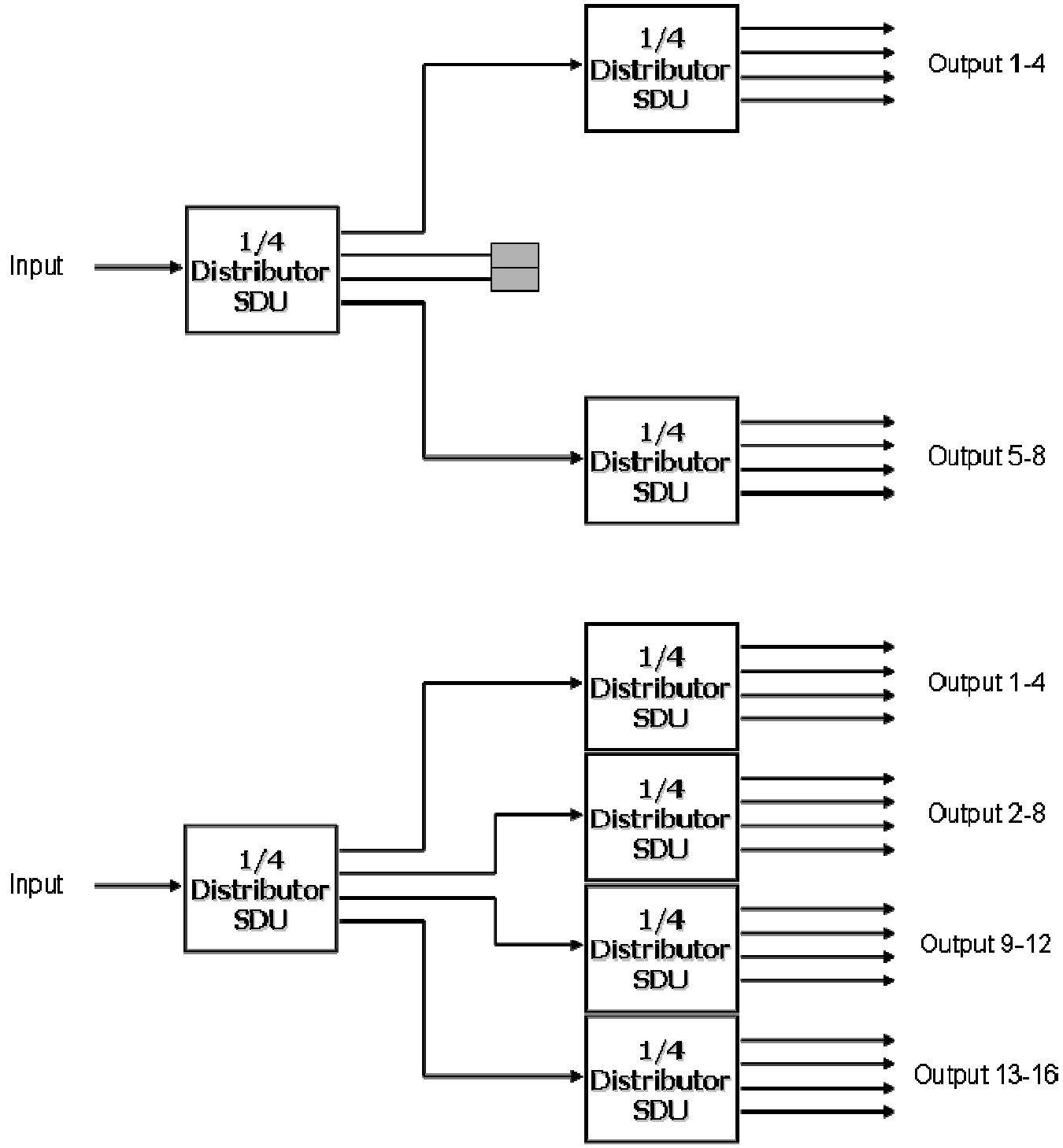
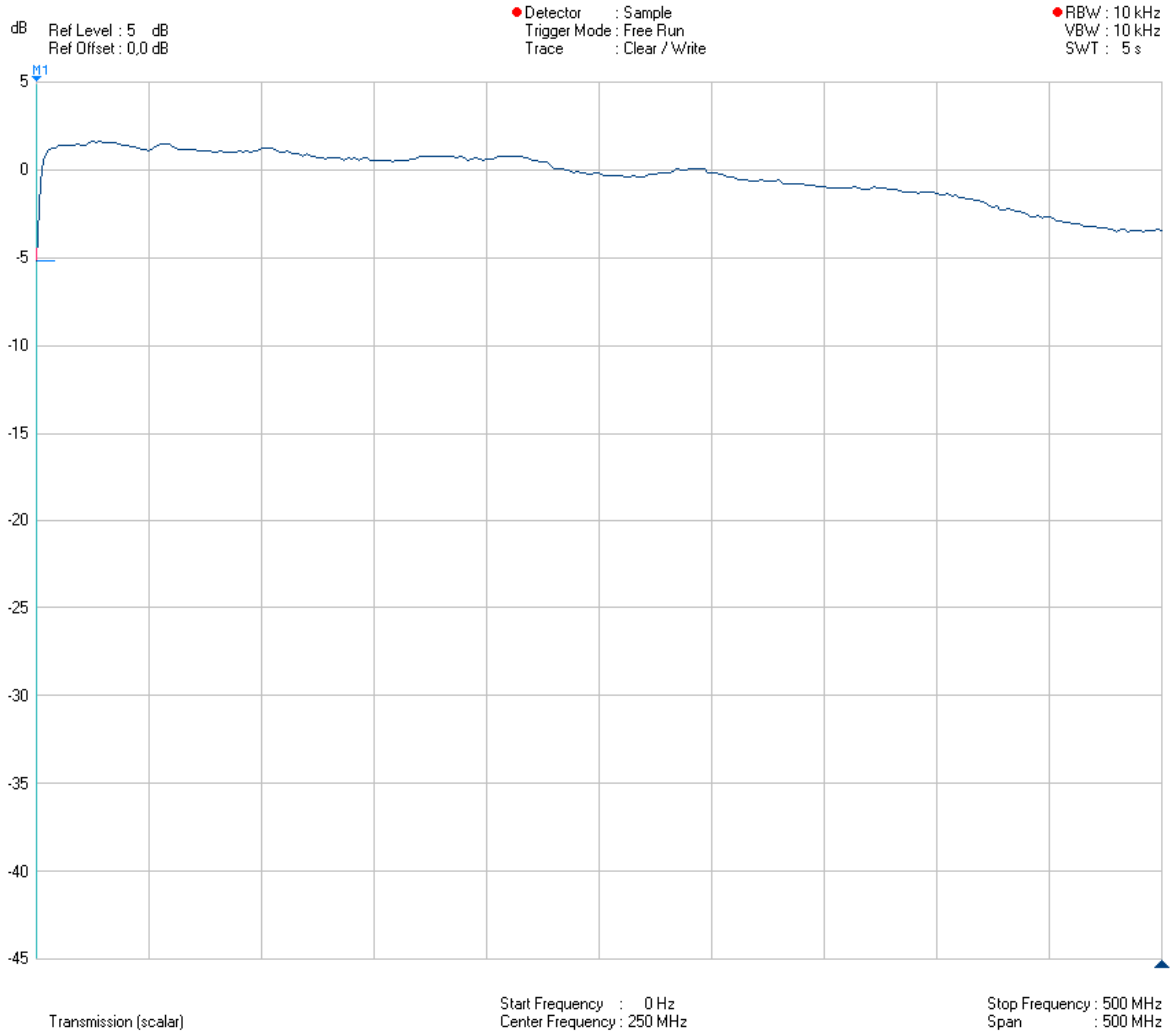
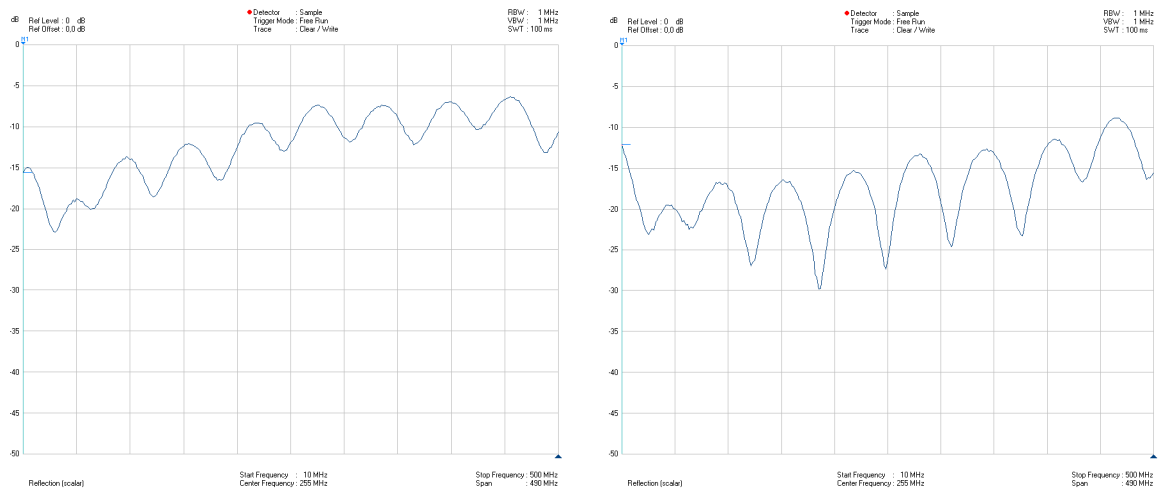
Functional block diagram



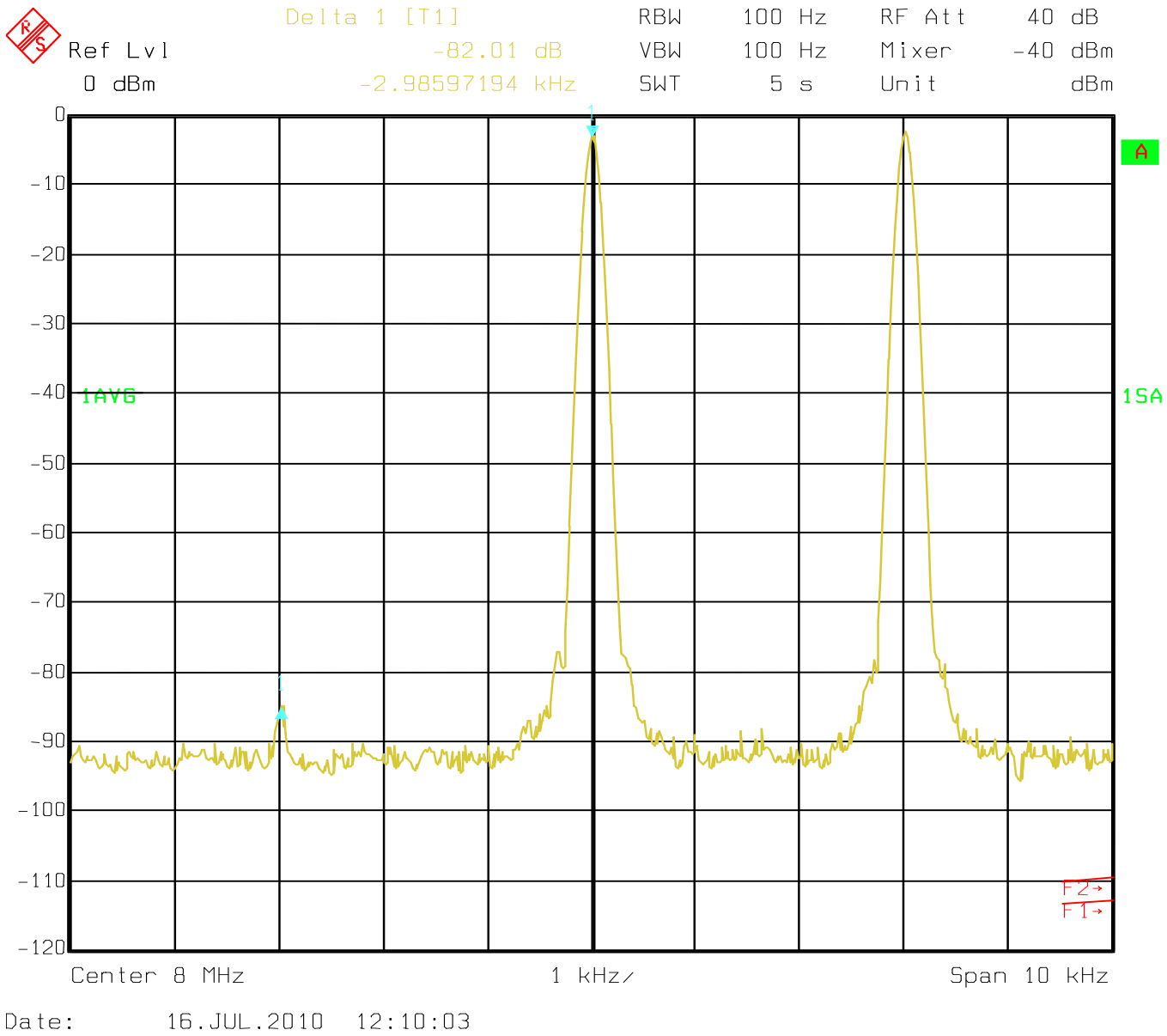
Typical performance



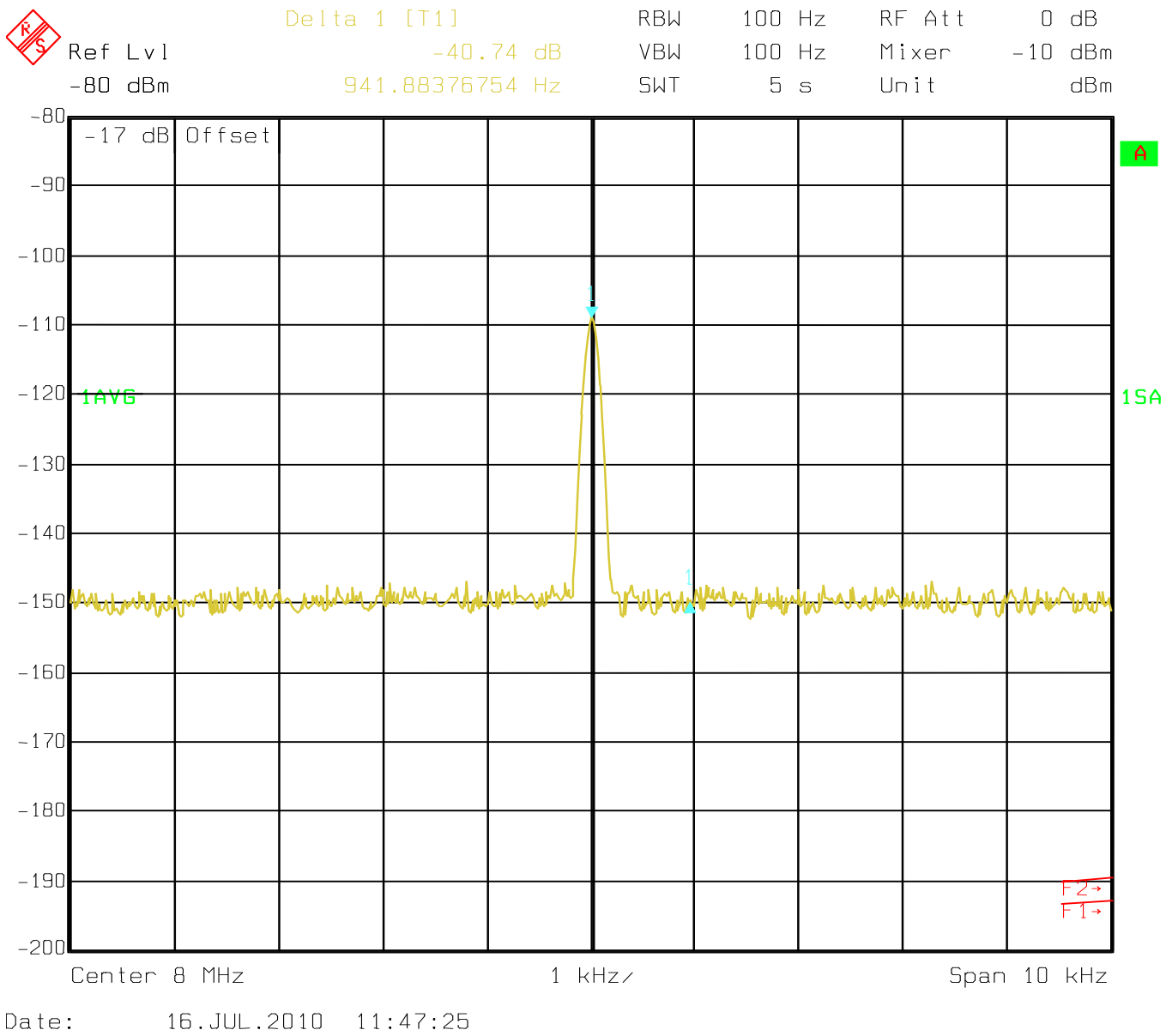
Insertion loss



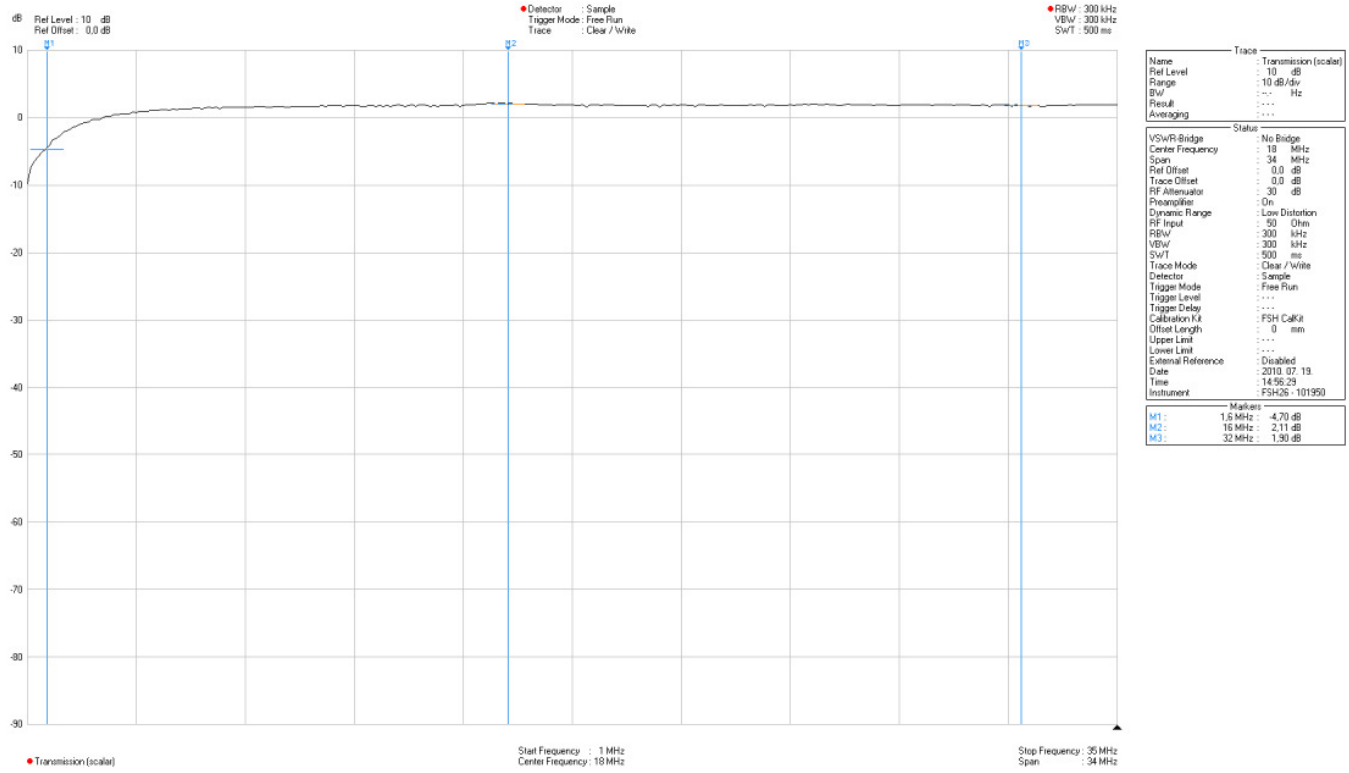
Return loss at input and output port



Intermodulation Distortion (0dBm out power level)



Signal to Noise Ratio (8MHz signal at -110dBm input level)


dB
Ref Level : 10 dB
Ref Offset : 0,0 dB
Detector : Sample
Trigger Mode : Free Run
Trace : Clear / Write
RBW : 300 kHz
VBW : 300 kHz
SWT : 500 ms
M1
M2
M3
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Trace
Name : Transmission (scalar)
Ref Level : 10 dB
Range : 10 dB/div
BW : --.- Hz
Result : ---
Averaging : ---
Status
VSWR-Bridge : No Bridge
Center Frequency : 18 MHz
Span : 34 MHz
Ref Offset : 0,0 dB
Trace Offset : 0,0 dB
RF Attenuator : 30 dB
Preamplifier : On
Dynamic Range : Low Distortion
RF Input : 50 Ohm
RBW : 300 kHz
VBW : 300 kHz
SWT : 500 ms
Trace Mode : Clear / Write
Detector : Sample
Trigger Mode : Free Run
Trigger Level : ---
Trigger Delay : ---
Calibration Kit : FSH CalKit
Offset Length : 0 mm
Upper Limit : ---
Lower Limit : ---
External Reference : Disabled
Date : 2010. 07. 19.
Time : 14:56:29
Instrument : FSH26 - 101950
Markers
M1 : 1,6 MHz : -4,70 dB
M2 : 16 MHz : 2,11 dB
M3 : 32 MHz : 1,90 dB
Transmission (scalar)
Start Frequency : 1 MHz
Center Frequency : 18 MHz
Stop Frequency : 35 MHz
Span : 34 MHz

Gain (1 - 35MHz)

Specification summary

Signal routing data	
Frequency range	1.5-500MHz (HF/VHF)
Number of inputs	1
Number of outputs	8 (SDU-500-8) 16 (SDU-500-16)
Input impedance	50 ohm
Output impedance	50 ohm
VSWR of input ports	MAX. 1:2.0
VSWR of output ports	MAX. 1:2.0
Gain	Full range - 0 dB +2dB/-6dB HF – 1.9/2.11db
Signal to Noise ratio:	40dB at (8MHz, -110dBm input level)
Noise figure	6dB typ.
Isolation :	OUT vs INPUT = 36dB OUT vs OUT = 22dB
Input power	15 dBm max.
OIP3	42dBm typ.
OIP2	46dBm typ.
Input connectors	BNC-F
Output connectors	BNC-F
General data	
Environmental requirements	MIL STD 810D
Electromagnetic compatibility	MIL STD 461C
Power supply	12V DC operation, Reverse polarity protected
Power consumption	15 W max.
Packaging	8: 1U 19” (H44mm, W440mm, L100mm) 16: 2U 19” (H88mm, W440mm, L100mm)
Weight	2.5 kg
Operating temperature	0°C to +40°C
Storage temperature	-30°C to +70°C
Relative humidity	95% maximum non condensing at 40°C