

Satellite Narrowband Downconverter (Indoor Version)

S-Band to 725 MHz Downconverter

S-Type (standard version), H-Type (MIL version, extended temperature range)

Specifications

Downconverter Type	SCD-S	
Reference Input	100 kHz	
RF-Input Frequency	2.3...2.9 GHz	
Conversion Scheme	Single down-conversion, no frequency inversion	
LO Frequency	1.55...2.2 GHz	
RF-Input Characteristics	Impedance	50Ω
	Return Loss	> 15 dB (VSWR = 1.22)
	Maximum Aggregate Input Level	0 dBm
	LO Leakage	-42 dBm max.
	RF-Connector	SMA female
IF-Output Characteristics	Frequency:	700...750 MHz
	Impedance:	50Ω
	Return Loss:	> 15 dB (VSWR = 1.22)
	1 dB Compression Point:	> +7 dBm
	IF-Connectors:	SMA female
Transfer Characteristics	Conversion Gain:	5...35 dB
	Gain-Resolution:	1 dB
	Gain Accuracy:	± 0.2 dB typical (± 0.3 dB max.)
	Gain Stability:	± 0.25 dB/day (constant temperature)
	Amplitude Ripple:	± 0.2 dB / 20 MHz
	IF Output Bandwidth (3 dB):	1 GHz ²
	Noise Figure:	< 12 dB ²
Group Delay (700...750 MHz)	Flat, Ripple:	1 ns peak to peak max.
Intermodulation (3rd Order)	-60 dBc max (Δf_{in} : 5 MHz, $P_{out\ ges}$: < -12 Bm) (OIP3 = +15 dBm)	
AM / PM conversion	0.1° / dB (P_{out} = 0 dBm)	
Phase Noise	10 Hz	- 50 dBc/Hz
	100 Hz	- 70 dBc/Hz
	1 kHz	- 80 dBc/Hz
	10 kHz	- 83 dBc/Hz
	100 kHz	- 95 dBc/Hz ¹
	1 MHz	- 111 dBc/Hz ¹
	1) 0°C to 50°C, outside this temperature range degraded by max 5 dB	
Spurious Outputs	Signal dependent:	< - 55 dBc
Frequency Stability	± 1 x 10 ⁻⁷ , 0°C to 50°C with OCXO ± 2 x 10 ⁻⁸ , 0°C to 50°C (after 10 min warm up) ± 5 x 10 ⁻⁹ per day (fixed temperature after 24 h warm up)	
Test Output (Microwave Oscillator)	not available	

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Specifications (cont.)

Part No.	SCD-S
Temperature Range	0 °C to 50 °C operating - 30 °C to 80 °C storage
Relative Humidity	< 95 % non condensing
Power Supply	85...264 V AC, 40...70 Hz
Power Consumption	Max: 24 VA / 14 W Typ: 20 VA / 11 W
User Interface	LCD, 2 x 40 characters, 4 cursor keys, 2 function keys Mains Power Switch on Front Panel
Mains Fuse	3.15 A time-lag fuse
Dimension and Weight	483 x 44 x 323 mm ³ , 1 RU (19") (maximum Dimension) 436 x 44 x 280 mm ³ (Dimension without Front panel) approx. 3.5 kg

Other Information

SCD-S-725 [IF Band in MHz]-LC

Examples:

SCD-S-725-50-LC
SCD-S-725-75-LC

Satellite Narrowband Downconverter (Indoor Version)

140 MHz to 15 MHz Downconverter

S-Type (standard version), H-Type (MIL version, extended temperature range)

Specifications

Part No.	DNC-V
VHF-Input Frequency	80...200 MHz
Conversion Scheme	Single down-conversion, no frequency inversion
LO Frequency	80...200 MHz, Resolution 10 Hz
RF-Input Characteristics	Impedance: 50Ω Return Loss: > 14 dB Maximum Aggregate Input Level: approx. -25 dBm (operational) approx. +10 dBm (damage level) RF-Connector: BNC female
Transfer Characteristics	Frequency: 0...30 MHz Impedance: 50Ω Return Loss: > 20 dB 1 dB Compression Point: > 10 dBm Output Muting: > 60 dB (during warm-up or during alarm condition) IF-Connectors: BNC female
Internal Filter*: *) other filter characteristics on request	4 internal filters 80...110 MHz 110...140 MHz 140...170 MHz 170...200 MHz
External Filter	via BNC connectors Impedance: 50 Ohms

Satellite Narrowband Downconverter (Indoor Version)

140 MHz to 15 MHz Downconverter

S-Type (standard version), H-Type (MIL version, extended temperature range)

Specifications (cont.)

Part No.	DNC-V
Phase Noise	10 Hz - 80 dBc/Hz
	100 Hz - 100 dBc/Hz
	1 kHz - 110 dBc/Hz
	10 kHz - 120 dBc/Hz
	100 kHz - 125 dBc/Hz ¹
1) 0°C to 50°C, outside this temperature range degraded by max 5 dB.	
Spurious Outputs	< - 70 dB
Frequency Stability	± 1 x 10 ⁻⁷ , 0°C to 50°C
	± 2 x 10 ⁻⁸ , 0°C to 50°C (after 10 min warm up)
	± 5 x 10 ⁻⁹ per day (fixed temperature after 24 h warm up)
Reference Output	Frequency: 10 MHz or 5 MHz
	Level: -3...10 dBm
	Modes: internal, external, auto (senses reference input)
	Impedance: 50Ω
	Connector: BNC female
Monitoring and Control Interface	TCP/IP over Ethernet (10 or 100 Mbit/s, auto sensing)
	RS232 or RS422/RS485 (Connectors DSUB09 female) (configurable by software)
	Mute Input: TTL logic input with internal pull up
Temperature Range	0°C to 50°C operating
	- 30°C to 80°C storage
Relative Humidity	< 95 % non condensing
User Interface	LCD-Display 2 x 40 characters, 4 cursor keys, 2 function keys
Power Supply	85...264 V AC, 40...70 Hz
Power Consumption	Max: 33 VA / 20 W
	Typ: 29 VA / 18 W
Mains Fuse	2 x 3.15 A time-lag fuse
Dimension and Weight	483 x 44 x 260 mm ³ , 1 RU (19") approx. 4.2 kg

ORDERING INFORMATION

DNC-V-15-50