

Sri Sai Communications Private Limited

SatCom & Defense Communication Systems & Products

DATASHEET

S BAND DOWN CONVERTER

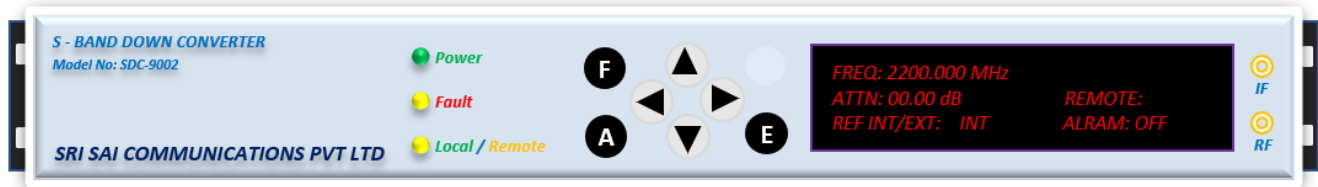
Model No : SDC-9002

Introduction

The unit receives the input signals in the range of 2200 MHz to 2300 MHz and down converts through dual conversion without inversion to 70MHz. Main features related to Gain, gain flatness, phase noise, spurious levels etc., are highlighted in this data sheet. The unit is locally controlled and monitored on front panel and also remotely controlled and monitored through different protocols like TCP/IP, RS422 et., The unit is housed in a 1RU chassis with agile features to cater for reliability and mechanical stability. Unit operates on 230V AC input power and the environmental specs catered for use in indoor controlled operations.

Features

<ul style="list-style-type: none"> ▪ Excellent phase noise of Local Oscillators with OCXO internal reference ▪ Auto selectable Internal/External reference ▪ Very low in-band and out-of-band spurious ▪ M&C integration through TCP IP, RS422, etc., Integration Protocols ▪ Remote Management through Web Interface Console 	<ul style="list-style-type: none"> ▪ On-board state-of-the-art microcontroller <ul style="list-style-type: none"> ○ Auto selectable Int./Ext. Reference ○ Summary alarm with form-c for redundancy ○ Memory storage facility for data recall ▪ Parameters like gain, frequency, etc are varied and displayed either on front panel or remote frontend
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Specification	Values	Specification	Values
Input (RF)		M&C Features	
Input Frequency	2200 MHz – 2300 MHz	Front Panel Controls	Frequency, Attenuation, Local / Remote Selections
Impedance	50 Ω	Monitoring	<ul style="list-style-type: none"> ▪ Frequency, Attenuation, Local / Remote, Ext/Int. on LCD Screen ▪ LED Status Indicators for Fault/Alarm, Power, Local/Remote
Return Loss	18 dB Minimum	Remote Control & Monitoring	Through protocols like RS-485/422 or RS-232 or TCP IP Ethernet, etc
Noise Figure	Better than 12 dB	Connectors	
Typical Input Level	- 45 dBm	Input RF	N Type (F)
Connector	N Type (F)	Output IF	BNC Type (F)
Output (IF)		Sample	RF – SMA (F), IF - BNC (F)
Frequency	70 MHz ±18 MHz	Physical Dimensions	Form Factor 1RU 19" Rack Mountable
Impedance	50 Ω	Environmental	Temp. 0 – 50° C, 0 – 95% relative humidity and 8000 ft MSL
Return Loss	> 18 dB	Power Input	Power Voltage 90-230 V AC, Frequency 47 - 63 Hz (Options Available)
Power output @1 dB compression	+10 dBm, Minimum		
Connector	BNC, (F)		
Transfer Characteristics			
Type	Dual Conversion		
Frequency Sense	No inversion		
Attenuation Adjust	0-30 dB in .25 dB Steps		
Conversion gain	40 dB Min		
Spurious	<ul style="list-style-type: none"> ▪ Non Carrier -70 dBm ▪ Carrier -60 dBc @ 0dBm Output 		
LO Characteristics			
1 st Conversion Oscillator	Synthesizer with step size of 1 KHz	Phase Noise	-70 dBc @ 100 Hz
2 nd Conversion Oscillator	Phase Locked Oscillator		-80 dBc @ 1 KHz
10 MHz Internal / External Reference	Auto select when external reference is fed		-90 dBc @ 10 KHz
			-100 dBc @ 100 KHz

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BLOCK DIAGRAM

