

Block Up Converter

Medium power Ku-Band 6900 series SPECIFICATIONS

RF SPECIFICATIONS

IF input

Frequency range	
Standard and Offset band	950 to 1450 MHz
Extended band	950 to 1700 MHz
Impedance	50 Ω
Connector	N female
VSWR	1.5:1 maximum

Gain specification

Gain @ 0 dB attenuator setting	
6916	73 dB nominal
6925	74 dB nominal
Transmit attenuator	0, 4, 8 and 12 dB settings
Gain flatness	± 0.75 dB maximum, 40 MHz ± 1.5 dB maximum, full band
Gain stability	
over any 50°C range	± 1.0 dB maximum
over -40°C to +55°C	
when frequency set	± 1.25 dB maximum
when frequency not set	± 2.0 dB maximum

RF output

Frequency range	
Standard band	14.0 to 14.5 GHz
Extended band	13.75 to 14.5 GHz
Offset band	13.75 to 14.25 GHz
Connector	PBR120 flange (WR75) with 4.2 mm through holes
VSWR	1.5:1 maximum
Power @ 1 dB GCP	
6916, 16 W	+42.0 dBm typical +41.7 dBm minimum
6925, 25 W	43.7 dBm typical 43.4 dBm minimum
Carrier to intermodulation ratio	-25 dBc, two carriers, each @ 6 dB OPBO from 1 dB GCP
Output power meter	
Range	
6916	Down to P1dB - 10 dB
6925	Down to P1dB - 15 dB
Absolute accuracy	
when frequency set	± 1.0 dB maximum
when frequency not set	± 2.0 dB maximum
Relative accuracy	
when frequency set	± 0.5 dB maximum
when frequency not set	± 1.0 dB maximum
Modes	CW, burst with adjustable threshold

Spurious output

CE compliance	Meets EN 301 428 with 54 dBi antenna gain
Spurious	-60 dBc maximum @ 3 dB OPBO
Harmonics	-70 dBc maximum @ 3 dB OPBO

Phase noise (SSB)

100 Hz	-63 dBc/Hz maximum
1 kHz	-73 dBc/Hz maximum
10 kHz	-83 dBc/Hz maximum
100 kHz	-93 dBc/Hz maximum

Frequency reference

Frequency	10 MHz
Level	-10 to +5 dBm
Phase noise (SSB)	
100 Hz	-135 dBc/Hz maximum
1 kHz	-145 dBc/Hz maximum
10 kHz	-155 dBc/Hz maximum
100 kHz	-155 dBc/Hz maximum
Input connector	Multiplexed on the transmit IF

Frequency conversion

LO frequency	
Standard & Extended band	15450 MHz
Offset band	15200 MHz
Sense	Spectrum inverting

POWER SUPPLY

Power supply

Input voltage	94 to 275 V AC
Frequency	45 to 65 Hz
Consumption	
6916	300 W maximum, power factor corrected
6925	375 W maximum, power factor corrected
Connector	Amphenol T3110 000, mating connector supplied

PHYSICAL

Size

6916, 6925	522 mm L x 182 mm W x 202 mm H
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Weight

6916, 6925	11.8 kg
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Mounting

6916, 6925	Boom mounting kit supplied
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MONITOR AND CONTROL

Monitor and control (FSK)

Mode	FSK modulation
Protocol	User selectable
Data format	User selectable
Connector	Multiplexed on the transmit IF
Data transmitter	
Frequency	650 kHz \pm 1%
Deviation	60 kHz \pm 1%
Sense	+60 kHz = mark, -60 kHz = space
Output level	-3 dBm nominal
Start tone time	10 ms minimum
Data receiver	
Nominal frequency	650 kHz
Locking range	\pm 30 kHz
Input sensitivity	-15 dBm minimum

Monitoring and control (digital)

Interfaces	RS232, RS485 (4-wire, 2-wire strapable)
Data format	
RS232	9600 bit/s, 8 bits no parity, 1 stop bit, ASCII protocol
RS485	User selectable format and protocol
Connector	MIL-C-26482 12-14S socket

Monitoring and control functions

Serial interface functions: Power amplifier on, Output power, Temperature, Fault status, Model number, Serial number, Software version, Compensation frequency, Transmit attenuator, Burst threshold, Packet address, Packet protocol

Other monitoring functions: Loss of lock causes alarm contact closure and attenuates RF output by >70 dB. LED indicators for: Power on, Transmit on and BUC fault

ENVIRONMENTAL

Operating temperature range	-40°C to +55°C
Relative humidity	100%
Cooling	Forced air
Weatherproofing	Sealed to 34 kPa

Specifications subject to change without notice or obligation.
Contact Codan for availability of specific option combinations.

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