

L-Band IF transceiver

Medium power Ku-Band 6900 series

SPECIFICATIONS

MEDIUM POWER BLOCK UP CONVERTER

IF Input	
Frequency range	950 to 1450 MHz
Impedance	50 Ω
Connector	N female
VSWR	1.5:1 maximum
Gain specification	
Gain @ 0 dB attenuator setting 6916, 16 W	73 dB nominal
Transmit attenuator	0, 2, 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 over -40°C to +55°C	± 1.0 dB maximum
when frequency set when frequency not set	± 1.25 dB maximum ± 2.0 dB maximum
RF output	
Frequency range	14.0 to 14.5 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
Carrier to intermodulation ratio	-25 dBc, two carriers, each @ 6 dB OPBO from 1 dB GCP
Output power meter	
Range	P1dB down to P1dB - 14 dB
Absolute accuracy when frequency set when frequency not set	± 1.0 dB maximum ± 2.0 dB maximum
Relative accuracy when frequency set when frequency not set	± 0.5 dB maximum ± 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	-5 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	15450 MHz
Sense	Spectrum inverting

Power supply

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

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	± 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, Transmit 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

LOW NOISE BLOCK CONVERTER

Indicative specifications.

Input	
Frequency range	
Band 1	10.95 to 11.7 GHz
Band 2	11.7 to 12.2 GHz
Band 3	12.25 to 12.75 GHz
Interface	PBR120 flange (WR75)
VSWR	2.5:1 typical
Noise temperature	
	75 K @ 25°C maximum
Gain specification	
Gain	60 dB nominal
Gain flatness	± 2.0 dB maximum full band
Output	
Frequency range	950 to 1450/1700 MHz
1 dB GCP	0 dBm minimum
Impedance	50 Ω (75 Ω optional)
Connector	N female (F female optional)
VSWR	2:1 typical
Frequency reference	
Frequency	10 MHz
Level	-5 to +5 dBm
Connector	Multiplexed on the receive IF
DC power	
Voltage	+15 to +24 V DC
Current	450 mA maximum
Connector	Multiplexed on the receive IF

ENVIRONMENTAL

Operating temperature range	
6916 and LNB	-40°C to +55°C
Relative humidity	
6916 and LNB	100%
Cooling	
6916	Forced air
LNB	Convection
Weatherproofing	
6916	Sealed to 34 kPa
LNB	Weatherproof

PHYSICAL

Size	
6916	443 mm L x 186 mm W x 203 mm H
LNB	150 mm L x 70 mm W x 50 mm H
Weight	
6916	12 kg
LNB	0.5 kg
Mounting	
6916	Boom mounting kit supplied
LNB	Feed mount



www.satcom-services.com

Mike Termond
Phone: 1.805.649.1384 Fax: 1.805.500.4328
mike@satcom-services.com
25 Creek Lane
Oak View, CA 93022 USA