

# EXPLORER 6000 Ku-band LNB



Internal Dual-band LNB used in EXPLORER 6000 Series

Interface	Model	Specification
Input, Ku-band		Custom Cobham waveguide
Output, IF		TNC-Connectors on the Pol Motor Enclosure (for Co-Pol and X-Pol) SMA Connectors (50 Ohm) on the actual LNB inside the Enclosure
Stability		Stable with any passive load on input and output
LO type		Locked to 10 MHz external reference over IF interface or ACU internal
LO frequencies	Dual-band	9.75, 10.75 GHz (Controlled by SW)

Parameter	Condition / Remark	Unit	Min.	Typical	Max.
Input frequency range	VSAT	GHz	10.7		12.75
Output (IF) frequency range		MHz	950		2150
VSWR	Input	-			2.0 : 1
	Output	-			1.7:1
Noise Figure	At 25°C	dB		0.8	1.0
	Worst case	dB			1.3
Gain (absolute linear)	Over input freq. Range	dB	59	63	67
Gain (relative)	Over 500 MHz BW	dB	-2.0	0	2.0
	Over 36 MHz BW	db	-0.5	0	0.5
Group delay (relative)	7.60 - 9.80 GHz	ps p-p			600
LO leakage	At input, only LO	dBm			-60
	At output (IF), only LO	dBm			-40
Spurious out	At input, only LO	dBm			-60
	At output (IF), only LO	dBm			-40
1 dB compression point	Output	dBm	5		
Two tone IP 3 (OIP3)	Output	dBm	15		
External ref. freq. (input)	Nominal	MHz		10,000000	
External reference freq. (input)	Deviation	Hz	-100	0	100
External ref. Level (input)	-	dBm	-7,0	0,0	5,0
External ref. phase noise (input)	100 Hz	dBc/Hz			-131
	1 kHz	dBc/Hz			-136
	≥10 kHz	dBc/Hz			-141
LO phase noise (output)	100 Hz	dBc/Hz			-70
	1 kHz	dBc/Hz			-75
	10 kHz	dBc/Hz			-80
	100 kHz	dBc/Hz			-90
	≥ 1 MHz	dBc/Hz			-120

Subject to change without further notice.

# EXPLORER 6000 Ku-band LNB



Internal dual-band LNB used in EXPLORER 6000 Series

Parameter	Condition / Remark	Unit	Min.	Typical	Max.
Power supply voltage	DC	V	11.0		19.0
Supply current	DC	mA			320
LO selection tone (Not activated on the LNB)	Freq. (input)	kHz	18,0	22,0	26,0
	Amplitude (ON) (input)	Vpp	0,4	0,6	0,8
	Amplitude (OFF) (input)	Vpp	0,0		0,2
	Duty cycle (input)	%	40	50	60
LO selection voltage	Voltage, low (L) (input)	V	11.0		14.0
	Voltage, high (H) (input)	V	16.0		19.0
Temperature range (ambient)	Operation	°C	-30		75
	Storage	°C	-40		85
Vibration	Operation, 1 gp sine	Hz	5		500
	Survival time per axis at 2.4 grms random 5-500 Hz	h	2		
ESD	EN61000-4-2, cont. & air	kV	6 & 8		
Dust and water proofing	IP65 inside Pol Motor Enclosure		N/A, ventilated, shielded housing for use inside Pol Motor Enclosure		
MTBF	At 45 °C ambient	h	100000		
	At 75 °C ambient	h	8000		
Dimensions (incl. connector) over all	L	mm			100
	W	mm			62
	H	mm			25
Weight	Total	g			200

## 2-band LNB: LO selection truth table

LO frequency / GHz	Voltage	Tone
9.75	L	N/A
10.75	H	N/A

For further information please contact:

Cobham SATCOM Land  
Lundtoftegaardsvej 93 D  
DK-2800 Kgs. Lyngby, Denmark  
Tel: +45 3955 8800

Subject to change without notice

[www.cobham.com/satcom](http://www.cobham.com/satcom)