



2209HSBF

2000 Single Band Ku-Band PLL LNB (0.9 dB)

Frequency: B: 12.25 - 12.75 GHz

L.O. Stability: +/- 25 kHz

Output Connector: F: 75 Ohm



KEY SPECIFICATIONS

Band	Ku-Band
Duty Cycle	50% $\pm$ 10%
Input Frequency Band 1	12.25 - 12.75 GHz
LO Frequency 1	11.30 GHz
LO Stability	$\pm$ 25 kHz
LO Type	PLL
Noise Figure Max	1.0 dB
Noise Figure Typ	0.9 dB
Number Of Onboard Los	Single-Band
Output Frequency Band 1	950 - 1450 MHz

RF SPECIFICATIONS

Conversion Gain Max	65 dB
Conversion Gain Min	55 dB
Conversion Gain Typ	60 dB
Gain Flatness (over Full Band)	$\leq$ 6 dB p-p
Input VSWR	2.3 : 1 max.
Output P1db	+ 5 dBm min.
Output VSWR	2.2 : 1 max.
Phase Noise 0.1khz Offset Max	-65 dBc/Hz
Phase Noise 1khz Offset Max	-75 dBc/Hz
Phase Noise 10khz Offset Max	-80 dBc/Hz
Phase Noise 100khz Offset Max	-93 dBc/Hz



ELECTRICAL SPECIFICATIONS

Current Consumption	350 mA max
Power Requirements	+12 to +24V DC

INTERFACE SPECIFICATIONS

IF Connector	F-Connector
RF Input Connector	WR-75 waveguide grooved

ENVIRONMENTAL SPECIFICATIONS

Humidity	0 - 95%
IP Rating	IP 66
Temperature Operational	-40°C to +70°C
Temperature Storage	-50 to +80°C

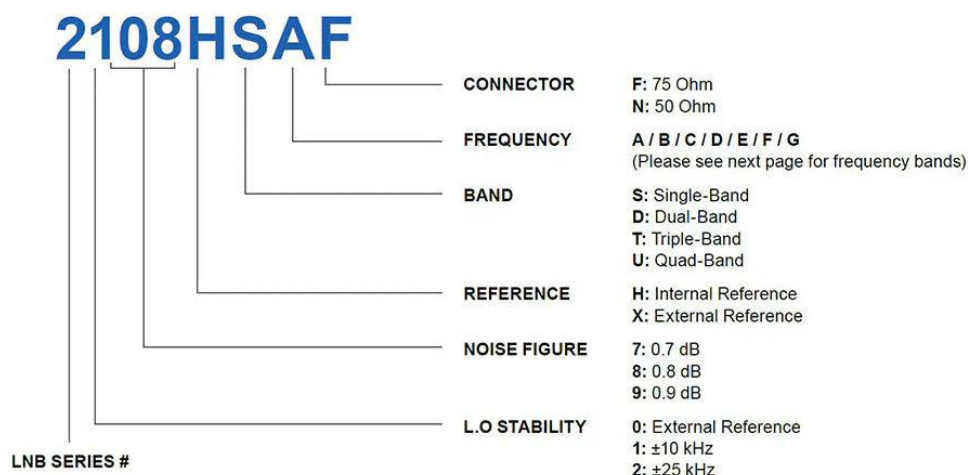
PHYSICAL SPECIFICATIONS

Product Height	1.70 in
Product Length	4.46 in
Product Weight	0.255 kg
Product Width	1.72 in

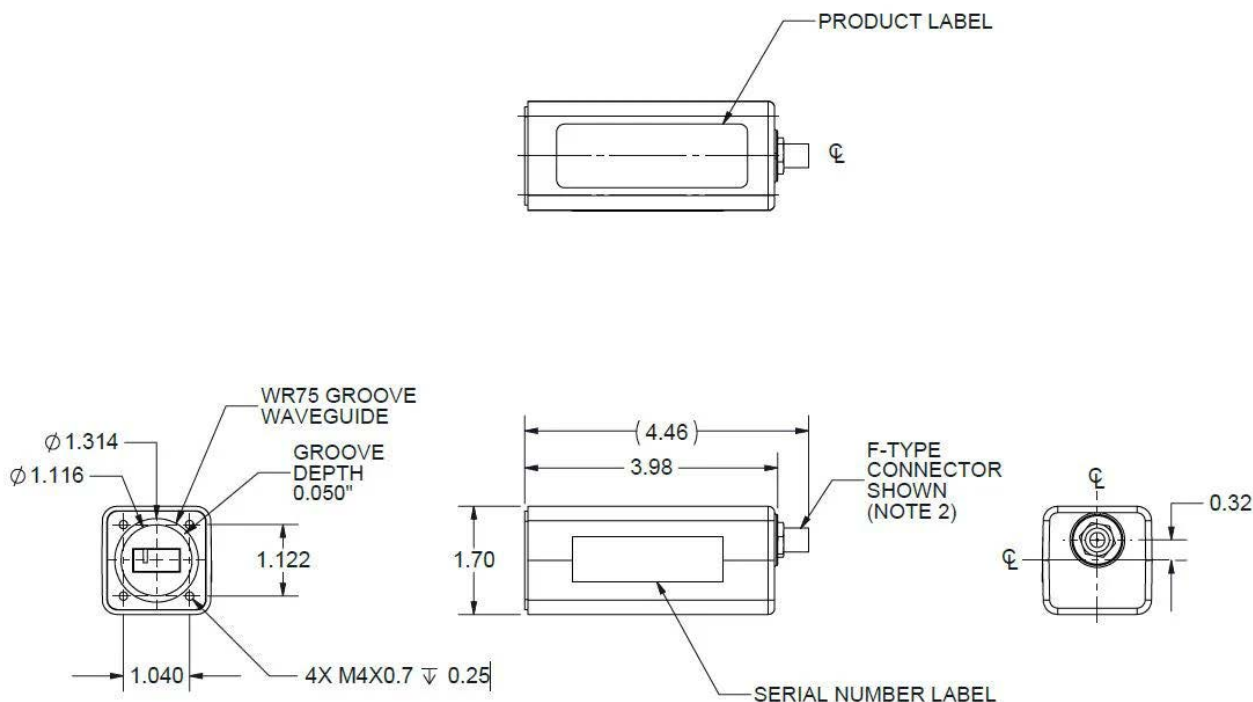
LOGISTICS SPECIFICATIONS

HS Code	Country of Origin	Ex Works	ECCN Number	Unit Package
8517690000	Made in Canada	Richmond, BC, Canada	EAR99	135 x 68 x 48 mm 0.335 kg

HOW TO ORDER



MECHANICAL DIAGRAMS



FREQUENCY BANDS

Single Band					Dual Band					
Band	RF freq (GHz)	L.O freq (GHz)	Output freq		Band	RF freq (GHz)	L.O freq (GHz)	Output freq	Voltage/Tone	
A	11.7 - 12.20	10.75	950 - 1450 MHz		A	Band 1	10.95 - 11.70	10	950 - 1700 MHz	
B	12.25 - 12.75	11.3	950 - 1450 MHz			Band 2	11.70 - 12.75	10.75	950 - 2000 MHz	
C	10.95 - 11.70	10	950 - 1700 MHz		B	Band 1	10.70 - 11.70	9.75	950 - 1950 MHz	
D	10.70-11.80	9.75	950 - 2050 MHz			Band 2	11.70 - 12.75	10.75	950 - 2000 MHz	
Triple Band					C	Band 1	10.95 - 11.70	10	950 - 1700 MHz	
Band	RF freq (GHz)	L.O freq (GHz)	Output freq	Voltage/Tone		Band 2	11.70 - 12.20	10.75	13 V / 22 kHz	
A	Band 2	11.70 - 12.20	10.75	950 - 1450 MHz	D	Band 1	10.95 - 11.70	10	950 - 1700 MHz	
	Band 3	12.20 - 12.75	11.25	950 - 1500 MHz		Band 2	11.70 - 12.25	10.75	13 V / 22 kHz	
B	Band 1	10.95 - 11.70	10	950 - 1700 MHz	D	Band 1	10.70 - 11.70	9.75	950 - 1950 MHz	
	Band 2	11.70 - 12.25	10.75	950 - 1500 MHz		Band 2	11.70 - 12.75	10.6	1100 - 2150 MHz	
C	Band 1	10.70 - 11.70	9.75	950 - 1950 MHz	Quad Band					
	Band 2	11.70 - 12.20	10.75	950 - 1450 MHz	Band	RF freq (GHz)	L.O freq (GHz)	Output freq	Voltage/Tone	
D	Band 3	12.20 - 12.75	11.25	950 - 1500 MHz	A	Band 1	10.70 - 11.20	9.75	950 - 1450 MHz	
	Band 1	10.70 - 11.70	9.75	950 - 1950 MHz		Band 2	11.20 - 11.70	10.25	950 - 1450 MHz	
E	Band 2	11.70 - 12.25	10.75	950-1500 MHz		Band 3	11.70 - 12.25	10.75	950 - 1500 MHz	
	Band 3	12.25 - 12.75	11.3	950-1450 MHz		Band 4	12.25 - 12.75	11.3	950 - 1450 MHz	
F	Band 1	10.95 - 11.70	10	950 - 1700 MHz	B	Band 1	10.70 - 10.95	9.75	950 - 1200 MHz	
	Band 2	11.55 - 12.25	10.6	950 - 1650 MHz		Band 2	10.95 - 11.70	10	950 - 1700 MHz	
G	Band 3	12.20 - 12.70	11.25	950 - 1450 MHz		Band 3	11.70 - 12.25	10.75	950 - 1500 MHz	
	Band 1	10.70 - 11.80	9.75	950 - 2050 MHz		Band 4	12.25 - 12.75	11.3	950 - 1450 MHz	
H	Band 2	10.95 - 12.10	10	950 - 2100 MHz	C	Band 1	10.70 - 11.20	9.75	950 - 1450 MHz	
	Band 3	11.70 - 12.75	10.75	950 - 2000 MHz		Band 2	11.20 - 11.70	10.25	950 - 1450 MHz	
I	Band 1	10.70 - 11.70	9.75	950 - 1950 MHz		D	Band 3	11.70 - 12.20	10.75	950 - 1450 MHz
	Band 2	11.70 - 12.70	10.75	950 - 1950 MHz			Band 4	12.20 - 12.75	11.25	950 - 1500 MHz
J	Band 3	12.25 - 12.75	11.3	950 - 1450 MHz	Band 1		10.95 - 11.45	10	950 - 1450 MHz	
					Band 2		11.45 - 11.95	10.5	950 - 1450 MHz	
					Band 3	11.70 - 12.20	10.75	950 - 1450 MHz		
					Band 4	12.20 - 12.75	11.25	950 - 1500 MHz		