

*Norden Millimeter is the leading developer of microwave and millimeter wave products, creating standard and custom RF amplifiers, frequency multipliers, frequency converters, and custom assemblies.*

DATASHEET

## NUC0218I0102 FEATURES

RF Frequencies  
**02-18 GHz**

IF Frequencies  
**1.375-2.375 GHz**



Conversion Gain  
**12 dB - 21 dB**

Input Power  
**0-5 dBm**

Operating Temperature  
**-40 to +85 deg C**

Norden Millimeter, as developers of custom frequency converters for military, commercial, and test applications, has several standard models available for immediate purchase. Our NUC0218I0102 product is one of our 02-18 GHz up converters, available to order with limited wait times.

NUC0218I0102 is already in use by the US military, telecommunications, and aviation companies. It has an input power level of between -10 and 10 dBm, a channel bandwidth of 1000 MHz, a noise density of -140 dBm/Hz, and several other technical specifications that can be reviewed on the following pages.

This up converter comes with two output frequencies:

- Band 1: 2 - 13.5 GHz
- Band 2: 12.5 - 18 GHz

If you are in need of a custom frequency converter with different specs, our development team researches, develops, tests, and creates custom devices. Our sales team is happy to walk you through the process. Contact us at any time for a quote, or for more information about our RF products.

# NUC0218I0102

02-18 GHZ FREQUENCY UP CONVERTER

# SPECIFICATIONS

Specification	MIN	MAX	Units
IF Input Frequency	1.375	2.375	GHz
IF Input Power Level, Maximum		-10	dBm
IF Input Power Level, Maximum no damage		10	dBm
Channel Bandwidth (IBW)	1000		MHz
RF Output Frequency	2	18	GHz
Band 1	2	13.5	
Band 2	12.5	18	
RF Output Spurious		-60	dBc
RF Output Spurious, within the channel BW, as a result of Integer, Fractional multiples, and MxN products of LO1 & LO2		-75	dBm
Nominal Attenuation with respect to 0 dB setting	56		dB
RF Output Attenuation step resolution	1		dB
Conversion Gain	12	21	dB
Channel Bandwidth Flatness		± 2.5	dB
Delta Gain Over Temperature		± 4	dB
RF Output Noise Density		-140	dBm/Hz
RF Output P1dB	14		dBm
LO1/IF Leakage		-60	dBm
LO1/RF Leakage		-55	dBm
LO2/IF Leakage		-60	dBm
LO2/RF Leakage		-60	dBm
VSWR at RF Out		2.0:1	
VSWR at IF Input		2.0:1	
VSWR at LO Input		2.0:1	
RF/IF/LO Connectors			
Band Switch Control, 5v TTL 1 bit			
RF Attenuator Control, 5v TTL 5 bits parallel			
IF Attenuator Control, 5v TTL 5 bits parallel			
LO Variable (LO1)			
LO1 (Swept LO) Frequency Band 1	7.76875	10.64375	GHz
Band 2	9.06875	10.19375	
Input Power	0	5	dBm
LO Fixed (LO2)			
Frequency Band 1	13.85		GHz
Band 2	10.7		
Input Power	0	5	dBm
LO Fixed (LO2)			
Frequency Band 1	13.85		GHz
Band 2	10.7		
Input Power	0	5	dBm
Input Voltage	25	31	VDC
Current		0.6	A
DC/Control Connector			
Pin 1 - RF Attn 1dB			
Pin 2 - RF Attn 2dB			
Pin 3 - RF Attn 4dB			
Pin 4 - RF Attn 8dB			
Pin 5 - RF Attn 16dB			
Pin 6 - IF Attn 1dB			
Pin 7 - IF Attn 2dB			
Pin 8 - IF Attn 4dB			
Pin 9 - IF Attn 8dB			
Pin 10 IF Attn 16dB			
Pin 11 Band 1			
Pin 12 +28V			
Pin 13 GND			
Pin 14 EMITTER			
Pin 15 BASE/COLLECTOR			
D x W x H			Inches
Base Plate Operating Temperature	-40	85	°C
Seal		0.0001	atm cm <sup>3</sup> /s

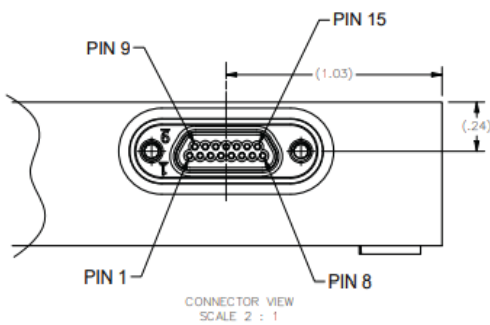
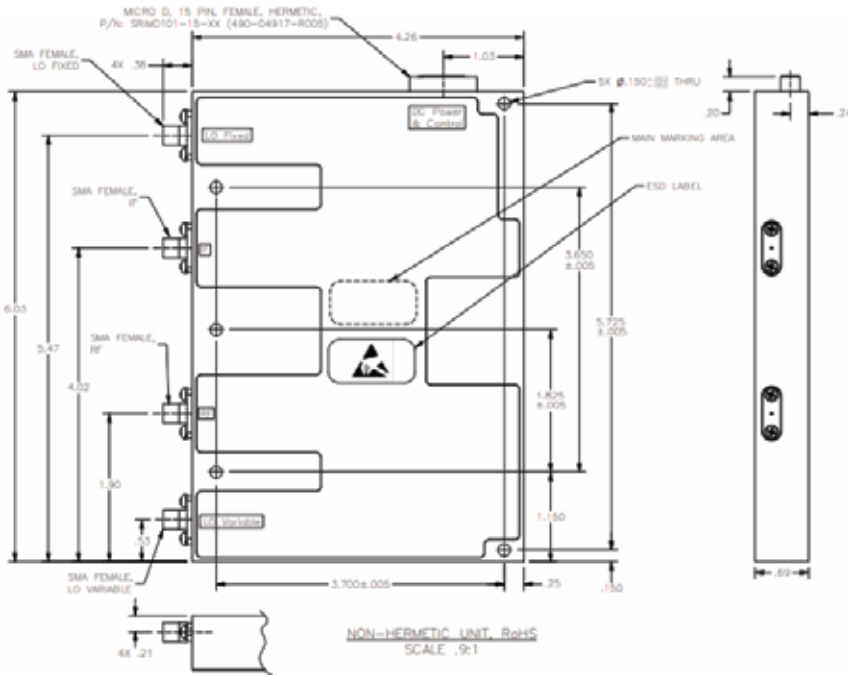
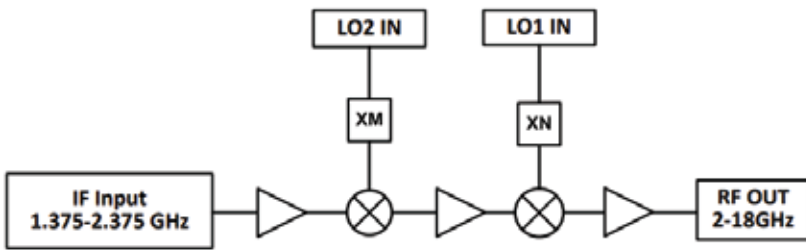


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# NUC0218I0102

02-18 GHz FREQUENCY UP CONVERTER

# SPECIFICATIONS



CONNECTOR	
PIN	DISCRIPTION
1	RFA1
2	RFA2
3	RFA4
4	RFA8
5	RFA16
6	IFA1
7	IFA2
8	IFA4
9	IFA8
10	IFA16
11	BAND1
12	+28V
13	GND
14	EMITTER
15	BASE/COL



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