



**DATASHEET**

*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.*

## **NDC0618I0102N10** **FEATURES**

Frequency Range  
**6 - 18 GHz**

SS Gain Typ  
**30 dB**

SS Gain Flatness Typical  
**+/- 1.5**

Input Return Loss Max  
**LO 1 = 34 - 39dB**

**LO2 = 19.7 or 25.7 dB**

Output Return Loss Max  
**1.3 - 2.3 dB**

Operating Temp  
**+25 deg C**

Norden Millimeter has an extensive catalog of standard frequency converters, with applications in the commercial, military, and test space. Within this product line is our NDC0618I0102N10 converter, with a frequency range of 6-18 GHz.

Included in Norden Millimeter's standard catalog parts, the NDC0618I0102N10 converter is an example of our extensive engineering and prototyping capabilities. Our RF converters are carefully engineered to meet the needs of your operations.

We encourage you to contact our sales team at 530-719-4704 to discuss any questions you may have along with what is best for your application. With amplifiers, down converters, up converters, transceivers, and other products operating between 0.5 and 110 GHz, Norden Millimeter is the top choice for both standard products and custom assemblies.

Norden Millimeter is ISO 9001:2015 and AS 9100D Certified.

# NDC0618I0102N10

6 - 18 GHz Down Converter

# SPECIFICATIONS

Specification	Units	MIN	MAX
<b>RF Characteristics</b>			
RF Input Frequency	GHz	6	18
Band 1		6	13.5
Band 2		12.5	18
RF Input Power Level, Maximum	dBm		-15
RF Input Power Level, Maximum no damage	dBm		0
Channel Bandwidth (IBW)	MHz	1000	
IF Output Frequency	GHz	1.375	2.375
IF Output Spurious	dBc		-60
IF Output Spurious as a result of Integer, Fractional multiples, and MxN products	dBm		-75
Nominal Attenuation with respect to 0 dB setting	dB	56	
RF Output Attenuation step resolution	dB	1	
Conversion Gain	dB	10	18
Channel Bandwidth Flatness	dB		± 2
Delta Gain Over Temperature	dB		± 3
IF Output P1dB	dBm		11
Noise Figure	dB		10
RF/IF Isolation	dB	80	
IF Output Noise Density	dBm/Hz		-130
LO1/IF Leakage	dBm		-65
LO1/RF Leakage	dBm		-65
LO2/IF Leakage	dBm		-65
LO2/RF Leakage	dBm		-65
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, 3.3v TTL 1 bit			
RF Attenuator Control, 3.3v TTL 5 bits parallel			
	Specification	Units	MIN
IF Attenuator Control, 3.3v TTL 5 bits parallel			
<b>LO Variable (LO1)</b>			
LO1 (Swept LO) Frequency Band 1	GHz	7.76875	10.64375
Band 2		9.06875	10.19375
Input Power	dBm	0	5
<b>LO Fixed (LO2)</b>			
Frequency Band 1, IF	GHz	13.85	
Band 2, IF		10.7	
Input Power	dBm	0	5
Input Voltage	VDC	25	31
Current	A		0.6
DC/Control Connector			
D x W x H	inches		
Base Plate Operating Temperature	°C	-20	65
Non-Hermetic			
RoHs Compliant			



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