



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.

NDC0218I0102

FEATURES

Frequency Range
2 - 18 GHz

SS Gain Typ
12 dB

SS Gain Flatness Typical+/-
2.0

Input Return Loss Max
Band 1 = 2 - 13.5 dB

Band 2 = 12.5 - 18 dB

IF Output P1dB
10 dBm

Base Plate Operating Temp
-20 min +65 max

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 NDC0218I0102 converter, with a frequency range of 2 - 18 GHz.

Included in Norden Millimeter's standard catalog parts, the NDC0218I0102 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.

NDC0218I0102

2 - 18 GHz Down Converter

SPECIFICATIONS

Specification	Units	MIN	MAX	Notes
RF Characteristics				
RF Input Frequency	GHz	2	18	
Band 1		2	13.5	
Band 2		12.5	18	
RF Input Power Level, Maximum	dBm		-5	
RF Input Power Level, Maximum no damage	dBm		0	
Channel Bandwidth (IBW)	MHz	1000		
IF Output Frequency	GHz	1.3	2.3	
IF Output Spurious	dBc		-60	@-5 dBm Input, RF Atten 20dB
Nominal Attenuation Range	dB	55		Separate RF & IF Attn Control
RF Attenuation step resolution	dB	1		
Conversion Gain	dB	12	21	0 dB Attenuation
IF Flatness	dB		± 2	
Delta Gain Over Temperature	dB		± 3	
IF Output P1dB	dBm	10		0 dB Attenuation
Noise Figure	dB		20	0 dB Attenuation
LO/RF Leakage	dBm		-65	
VSWR at RF Input			2.0:1	
VSWR at IF Output			2.0:1	
VSWR at LO Input			2.0:1	
RF/IF/LO Connectors				F- SMA
Band Switch Control, 3.3v TTL 1 bit				
RF Attenuator Control, 3.3v TTL 5 bits parallel				Low Input, or Open = Attn Off
IF Attenuator Control, 3.3v TTL 5 bits parallel				Low Input, or Open = Attn Off
Pin 1	RFA1	1 dB		
Pin 2	RFA2	2 dB		
Pin 3	RFA4	4 dB		
Pin 4	RFA8	8 dB		
Pin 5	RFA16	16 dB		
Pin 6	IFA1	1 dB		
Pin 7	IFA2	2 dB		
Pin 8	IFA4	4 dB		
Pin 9	IFA8	8 dB		
Pin 10	IFA16	16 dB		
Pin 11	BAND 1			BAND 1 Low or Open, BAND2 Hi
Pin 12	+ 28 V			
Pin 13	GND			
Pin 14	EMITTER			Transistor diode can be used for temp measurement.
Pin 15	BASE/COL			
LO				
Input Power (Both LOs)	dBm	0	5	
LO1 (Swept LO) Frequency	GHz	8.01875	10.64378	Internal x4
Band 1				
Band 2		9.06875	10.19375	
LO2 (Fixed LO) Frequency	GHz	13.850		
Band 1				
Band 2		10.700		
Input Voltage	VDC	26	31	
Current	A		0.6	@ 28 V
DC/Control Connector				Micro D, 15 pin, Female
D x W x H	Inches			4.26 x 6.03 x 0.69, OL-0627 Sht 3
Base Plate Operating Temperature	°C	-20	+65	
Non-Hermetic				



5441 Merchant Circle
 Placerville, CA 95667
 (530) 719-4704
www.nordengroup.com