

KA-BAND FREQUENCY BLOCK UP/DOWN CONVERTERS



Jersey Microwave has taken their standard field proven line (over 2000 delivered) of L-Band to Ka-Band high performance Frequency Block Converters and re-packaged them to handle the harsh Outdoor Environment. The Jersey KABUC and KABDC “ODU” Series covers every standard Ka frequency band and can accommodate custom frequency bands (≤ 2500 MHz bandwidth depending on frequency). Jersey Microwave engineers have over 35 years of designing and manufacturing frequency conversion products. All Jersey Microwave block converters are offered in both indoor rack chassis (IRU) and ruggedized outdoor enclosures.

Features/Options

**Low Phase Noise exceeds
IES308/309 & MIL-STD-188-164A**

**Available in Dual,
Tri & Quad Bands**

**Auto-Switchover of 5/10 MHz
external reference or manually
selectable internal reference**

**Electronic Adjustment
of Internal Reference**

90-260 VAC or 24-32 VDC

Ethernet Capability

RS-422/RS-485

Higher Output Power

Gain Control

Custom Frequencies

Monitor Ports

**Independent Contact Closure
Summary Alarm**

Slope Equalizer

Standard Frequency Bands

KABUC ODU | UP CONVERTER - Series

Model Number	Input Frequency	Output Frequency	LO Frequency
KABUC-247252-2010-ODU	950-1450 MHz	24.75-25.25 GHz	23.8 GHz
KABUC-275285-2010-ODU	950-1950 MHz	27.50-28.50 GHz	26.55 GHz
KABUC-276291-2010-ODU	950-2450 MHz	27.60-29.10 GHz	26.65 GHz
KABUC-285295-2010-ODU	1000-2000 MHz	28.50-29.50 GHz	27.5 GHz
KABUC-288296-2010-ODU	975-1725 MHz	28.875-29.625 GHz	27.9 GHz
KABUC-291293-2010-ODU	1300-1500 MHz	29.10-29.30 GHz	27.8 GHz
KABUC-290295-2010-ODU	1000-1500 MHz	29.00-29.50 GHz	28.0 GHz
KABUC-292300-2010-ODU	1000-1800 MHz	29.20-30.00 GHz	28.2 GHz
KABUC-295300-2010-ODU	1100-1600 MHz	29.50-30.00 GHz	28.4 GHz
KABUC-290300-2010-ODU	1000-2000 MHz	29.00-30.00 GHz	28.0 GHz
KABUC-295305-2010-ODU	1000-2000 MHz	29.50-30.50 GHz	28.5 GHz
KABUC-300308-2010-ODU	1000-1800 MHz	30.00-30.80 GHz	29.0 GHz
KABUC-300310-2010-ODU	1000-2000 MHz	30.00-31.00 GHz	29.0 GHz

Many models also available with 950 MHz Input

KABDC ODU | DOWN CONVERTER - Series

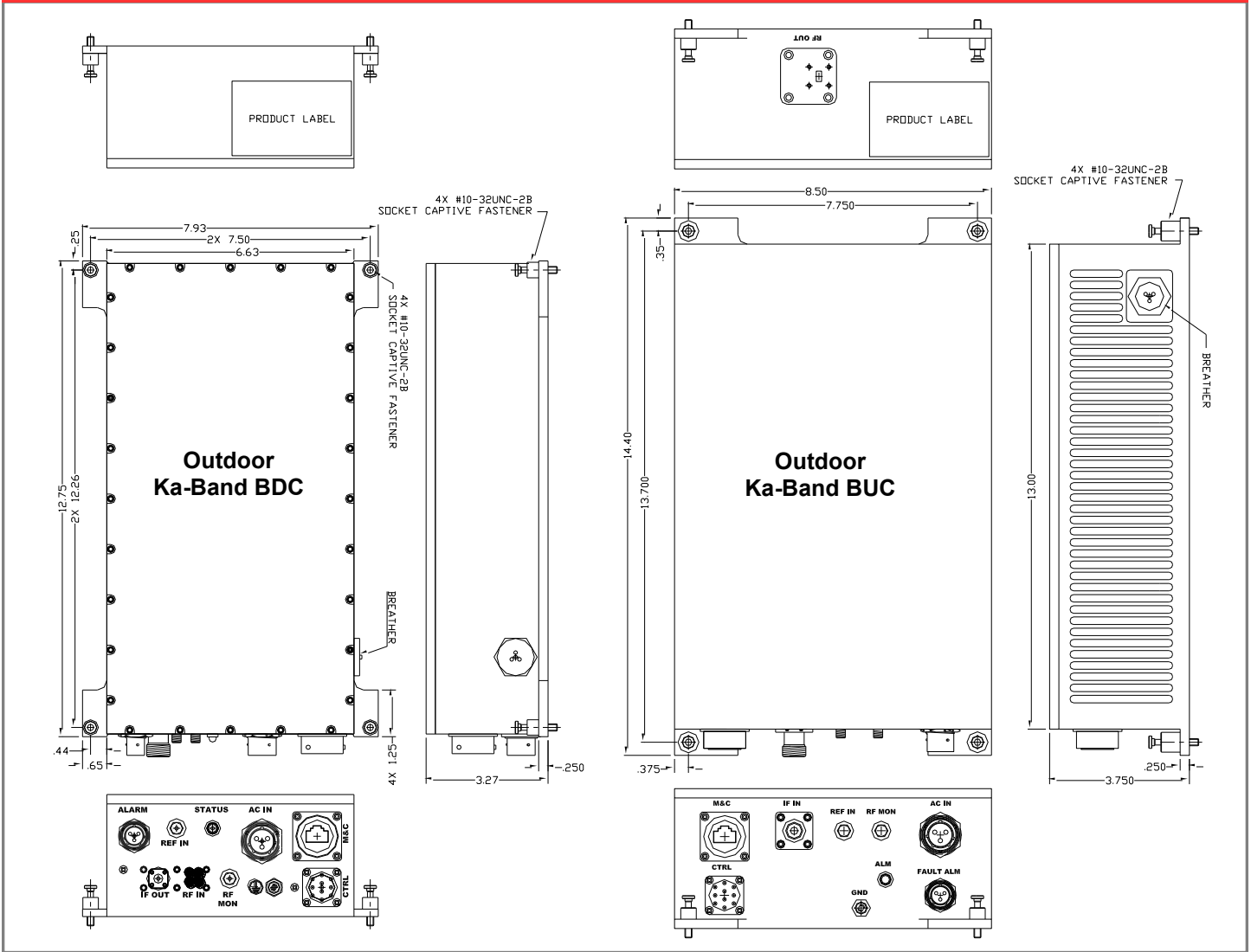
Model Number	Input Frequency	Output Frequency	LO Frequency
KABDC-178193-3015-ODU	17.80-19.30 GHz	950-2450 MHz	16.85 GHz
KABDC-183188-3015-ODU	18.30-18.80 GHz	1000-1500 MHz	17.3 GHz
KABDC-188193-3015-ODU	18.80-19.30 GHz	1000-1500 MHz	17.8 GHz
KABDC-193198-3015-ODU	19.30-19.80 GHz	1000-1500 MHz	18.3 GHz
KABDC-197202-3015-ODU	19.70-20.20 GHz	950-1450 MHz	18.75 GHz
KABDC-198203-3015-ODU	19.80-20.30 GHz	1000-1500 MHz	18.8 GHz
KABDC-195202-3015-ODU	19.50-20.20 GHz	1000-1700 MHz	18.5 GHz
KABDC-202212-3015-ODU	20.20-21.20 GHz	1000-2000 MHz	19.2 GHz
KABDC-360380-1010-ODU	36.00-38.00 GHz	1000-3000 MHz	35.0 GHz

Custom bands and custom specifications can be provided.

Electrical Specification		Up Converter	Down Converter
Gain		20 dB ±2 dB	30 dB ±2 dB
Gain Flatness	-Over RF Band -Over any 125 MHz Segment	1 GHz BW: ±1.25 dB max. / 500 MHz BW: ±1.00 dB max. ±0.50 dB max.	
Gain Stability		±0.50 dB / day max. at constant temperature ±1 dB over -20 to +60°C ±1.5 dB over -30 to +70°C	
Gain Control (at L-Band Input)		at L-Band Input	At L-Band Output
Range		25 dB	20 dB
Step Size (Digital 7-bit)		0.25 dB (0.1dB option)	0.25 dB (0.1 dB option)
Output Power Po (1dB)		+10 dBm min.	+15 dBm min.
Intermodulation Distortion (With two output carriers @ 0 dBm per)		-40 dBc max.	-50 dBc max.
Output Spurious (In-Band): - Signal Dependent (Po = 0 dBm) - Signal Independent - LO Leakage		-70 dBc max. -80 dBm max. -80 dBm max.	
Rejection at Receive Band		-70 dBc max.	N/A
2IF + LO @ Pout = -10 dBm (max gain)		-60 dBc max.	-N/A
Output Noise Density		128 dBm/Hz max.	N/A
Image Rejection		80 dB min.	70 dB min.
Noise Figure @ 25°C (max gain)		N/A	15 dB max.
Return Loss: Input Output		18 dB min. 17 dB min.	17 dB min. 18 dB min.
Reference Input Frequency		10 MHz	
Reference Input Level		-10 dBm to +5 dBm	
Frequency Stability (internal reference)		± 2 x 10 ⁻⁸ per day @ fixed temperature, ±5 x 10 ⁻⁸ over temperature	
Frequency Offset between External and Internal		<±1 KHz	
Group Delay		2 nsec peak-to-peak max.	
Type / Frequency Sense		Single Conversion / No Inversion	
Power Requirements			
Voltage Standard		90 - 260 VAC, Single Phase	
Frequency		47 - 63 Hz	
Power		30 Watts max.	25 Watts max.
DC Voltage (Option)		20 - 48 VDC	
Mechanical Configuration			
Weight		15 lbs max.	12.0 lbs max
RF Connectors		WR-28 Flat	2.92 mm
IF Connectors		N Female	N Female
Reference Connector		SMA Female	
AC Power Connector		PT07C12-3P (027)	
M & C Control Connector		PT02E-12-10P (025)	
Ethernet (Option)		RJ45 Female (RJF2SA1B)	
Environmental			
Temperature		-40°C to +70°C	-40°C to +85°C
Altitude		Up to 10,000 feet	Up to 50,000 feet
Humidity		Up to 100% Condensation	
Vibration		Normal Commercial Carrier Handling	

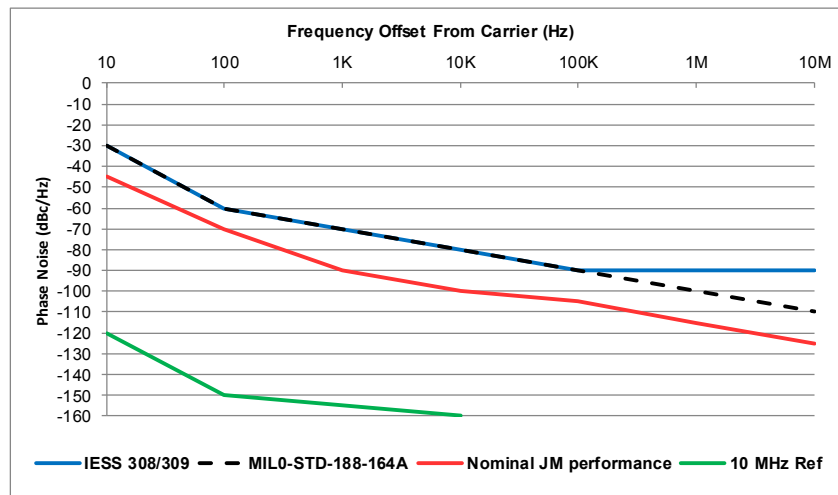
Note - Specifications may change without notice, please consult the factory for your specific needs.

Standard Mechanical Outlines



Note: Dimensions are in inches.

Phase Noise Characteristics (1.0 Hz Bandwidth)



DS-105-05