

C-BAND BLOCK CONVERTER MODULES



The **Jersey Microwave** Block Converter Module series are specially designed to translate a block of L-Band frequencies into C-Band, or vice versa. Our Block Converters are designed for transmitting or receiving applications in Intelsat, Eutelsat and other satellite communications systems. **Jersey Microwave** components can be tailored to meet your company's specific needs.

Features/Options

Excellent Frequency Stability

**Voltage Regulator &
Delay Circuit Included**

**Low Phase Noise - Intelsat/
Eutelsat Compliant**

Stable Gain Over Temperature

High Reliability & Low Cost

Low Power Consumption

**5, 10 and 20 Watt Versions
Available for BUC**

**Locks To External 5, 10 or 50
MHz References**

**Internal Reference –
Standard or High Stability**

**Gain Control at L-Band with
0.1 dB to 1.0 dB Step**

**Auto Switch-Over from
External to Internal REF**

Standard Frequency Bands

C-Band Block Down Converters — Series

Model Number	Input Frequency	Output Frequency	LO Frequency
CBDC-360420-2018	3600-4200 MHz	950-1550 MHz	5.15 GHz
CBDC-340420-2018	3400-4200 MHz	950-1750 MHz	5.15 GHz
CBDC-440500-2018	4400-5000 MHz	950-1550 MHz	3.45 GHz
CBDC-450530-3009	4500-5300 MHz	1300-2100 MHz	6.60 GHz
CBDC-642712-2018	6425-7125 MHz	2000-2700 MHz	9.125 GHz

C-Band Block Up Converters — Series

Model Number	Input Frequency	Output Frequency	LO Frequency
CBUC-440500-2018	950-1550 MHz	4400-5000 MHz	3.45 GHz
CBUC-585645-2018	950-1550 MHz	5850-6450 MHz	4.90 GHz
CBUC-585675-2018	950-1850 MHz	5850-6750 MHz	4.90 GHz
CBUC-585705-2018	950-2150 MHz	5850-7050 MHz	4.90 GHz
CBUC-625675-2018	950-1450 MHz	6250-6750 MHz	5.30 GHz
CBUC-642712-2018	950-1650 MHz	6450-7150 MHz	5.50 GHz
CBUC-715775-2018	950-1550 MHz	7150-7750 MHz	6.20 GHz

Custom bands and custom specifications can be provided.

Electrical Specification	Up Converter	Down Converter
IF Port Characteristics	Input	Output
Frequency Range	- See Table -	- See Table -
Connectors/Impedance	SMA-Female / 50 Ω	
Return Loss	18 dB min.	
RF Port Characteristics	Output	Input
Frequency Range	- See Table -	- See Table -
Connectors/Impedance	SMA-Female / 50 Ω	
Return Loss	18 dB min.	
LO Characteristics		
Internal Local Oscillator DRO	- See Table -	
Reference Input	10 MHz or 50 MHz (Option: 5 MHz)	
Reference Input Level	-10 dBm ± 10 dB	
Reference Port: Connectors/Impedance	SMA-Female / 50 Ω	
Return Loss	15 dB min.	
Frequency Stability: External	Same as the reference unit	
Option: Internal	±5 ppm max. (±1.0 ppm max. option) over temperature -30°C to +70°C	
Phase Lock Alarm: TTL	"H" = Locked / "L" = Unlocked	
Input to Output Performance		
Transfer Type	Single Conversion	
Gain	20 dB ± 2 dB	
Gain Flatness: Over RF Band	± 1.00 dB max.	
Over any 40 MHz Segment	± 0.25 dB max.	
Output Power Po (1dB)	+10 dBm min.	+18 dBm min.
IMD (two output carriers at -3 dBm per)	-40 dBc max.	-50 dBc max.
Gain vs. temperature		
At constant temperature	± 0.25 dB/day max. @ constant temperature 25°C	
Over the operating temperature	± 1.5 dB max.	
Noise Figure	15 dB max.	
Group Delay	2.0 nano second p-p max	
In-Band Spurious		
Signal Independent	-80 dBm max.	
Signal Dependent @Po = 0 dBm	-70 dBc max.	
LO Leakage @RF Port	-70 dBm max	
Image Rejection	-70 dBc max.	
SSB Phase Noise	External Reference	Internal Reference
10 Hz	REF – [20log(1/N) + 3 dB]	-45 dBc/Hz
100 Hz	REF – [20log(1/N) + 3 dB]	-75 dBc/Hz
1 KHz	REF – [20log(1/N) + 3 dB]	-90 dBc/Hz
10 KHz	REF – [20log(1/N) + 3 dB]	-100 dBc/Hz
100 KHz	REF – [20log(1/N) + 3 dB]	-105 dBc/Hz
1 MHz	-125 dBc/Hz typical / -120 dBc/Hz max.	-125 dBc/Hz
Supply Voltage	+15 Vdc or +12Vdc @ 650 ma	
Connector	Solder Feedthru	
Operating Temperature Range	-30° to +60° C	
Package Size (L x W x H)	4.40" x 2.96" x 1.16"	4.30" x 3.30" x 1.16"

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

DS-200-01