

HIGH POWER BUCs



SATELLITE COMMUNICATIONS

MORE POWER FOR YOUR BUC

Mitec, a global provider of RF components and systems to telecom and satcom markets, is cranking up the power.

Choose one of our high power block up-converters for L to Ku and L to C band and you'll receive a value priced solution, when you need it, where you need it, with everything you need. The fact is Mitec has been building and supporting carrier-grade solutions since 1973.

Fast delivery, full documentation, immediate product support, engineered solutions—that's Mitec.

YOUR DAILY EXPERIENCE POWERED BY MITEC

SALES@MITECTELECOM.COM | WWW.MITECTELECOM.COM | 1-514-694-9000





HIGH POWER BLOCK UP-CONVERTERS

L TO KU BAND 8-200W (P1dB) L TO C BAND 60-400W (P1dB)

Mitec's products have more than a quarter century of proven field experience, demonstrating their unmatched dependability and reliability day after day. This level of dependability can be found in our line of high power block up-converters. Uniquely designed to be a high quality but cost effective solution for the VSAT market, this line of high power BUCs sets the standard for the satellite industry.

The Mitec series of high power BUCs are designed for use primarily in VSAT applications. Other frequency ranges are also available to customer specification. These units include an L-band up-converter powered by 24 VDC along with L-Band input and 10 MHz reference all in one cable. There is also a high power booster with AC or DC supply and a customizable Monitor and Control interface.



INPUT IF BAND FOR THE L TO KU BAND BUC:

- Standard Band: 950-1450 MHz
- Extended Band: 950-1700MHz



INPUT IF BAND FOR THE L TO C BAND BUC:

- Standard Band: 950-1450 MHz
- Super Extended Band: 950-1825 MHz
- Low Extended Band: 950-1650 MHz
- INSAT Band: 1275-1575 MHz
- Palapa Band: 975-1275 MHz



KEY FEATURES

- Frequency range options available
- Can be provided with 10MHz and/or 24VDC option
- Redundancy option for 1:1 configuration available for all power levels
- RS485, RS232, RS422 or Analog M&C interface
- High thermal dissipation efficiency resulting in “Best in Class” Mean Time Before Failure (MTBF)
- Summary alarm
- Over temperature shutdown
- RF power detection
- Mute control
- RF monitor



OUTPUT RF FREQUENCY IN STANDARD KU BAND FOR THE L TO KU BAND:

- Standard Ku-Band: 14.00-14.50 GHz
- Extended Ku-Band: 13.75-14.50 GHz



OUTPUT RF FREQUENCY IN STANDARD C BAND FOR THE L TO C BAND:

- Standard C-Band: 5.850-6.425 GHz
- Super Extended C-Band: 5.850-6.725 GHz
- Low Extended C-Band: 5.725-6.425 GHz
- INSAT C-Band: 6.725-7.025 GHz
- Palapa C-Band 6.425-6.725 GHz

HIGH POWER BUCs SPECIFICATIONS

ELECTRICAL CHARACTERISTICS	L TO KU BAND BUC 8-200W (P1dB)	L TO C BAND BUC 60-400W (P1dB)
Input Frequency range – IF	950-1450 MHz Ext. Band: 950-1700 MHz	Std. Band: 950-1525 MHz Super Ext. Band: 950-1825 MHz Low Ext. Band: 1650-950 MHz Palapa Band: 1135-1435 MHz Insat Band: 975-1275 MHz
Output Frequency range – RF	Std. Band: 14.00-14.50 GHz Ext. Band: 13.75-14.50 GHz	Std. Band: 5.850-6.425 GHz Super Ext. Band: 5.850-6.725 GHz Low Ext. Band: 5.725-6.425 GHz Palapa Band: 6.425-6.725 GHz Insat Band: 6.725-7.025 GHz
Local Oscillator Frequency	Std. Band: 13.05 GHz Ext. Band: 12.80 GHz	Std. & Super Ext. Bands: 4.9 GHz Low Ext. Band: 7.375 GHz Palapa band: 5.290 GHz Insat Band: 5.750 GHz
Small Signal Gain	70 dB min. (80 dB typical)	70 dB min. (80 dB typical)
Gain Flatness at fixed temperature	Std. Band: ±1 dB over 40 MHz; ±2.5 dB over full band Ext. Band: +/-1 dB over 40 MHz; +/-3.5 dB over full band	Std. Band: ±1 dB over 40 MHz; ±2.5 dB over full band Low & Super Ext. Band: ±1 dB over 40 MHz; ±3.5 dB over full band
Gain Variation over temperature range at fixed frequency	± 3 dB	±3 dB
Input/Output Return loss	18 dB min.	18 dB min.
Spurious at rated power	- 50 dBc max.	- 50 dBc max.
Third order IMD (2 equal tones 5 MHz apart)	- 26 dBc max. @ 3 dB back off SCL 6 dB back off from P1dB	- 26 dBc max. @ 3 dB back off SCL 6 dB back off from P1dB
PHASE NOISE		
@ 300 Hz offset	- 60 dBc/Hz	- 60 dBc/Hz
@ 1 KHz offset	- 70 dBc/Hz	- 70 dBc/Hz
@ 10 KHz offset	- 80 dBc/Hz	- 80 dBc/Hz
@ 100 KHz offset	- 90 dBc/Hz	- 90 dBc/Hz
@ 1 MHz offset	- 100 dBc/Hz	- 100 dBc/Hz
Supply Voltage for BUC	24 VDC & 10 MHz (other options available)	24 VDC & 10 MHz (other options available)
For Booster	110/220 VAC (47-63 Hz) Auto Ranging except where 220 VAC only is indicated (48 VDC optional)	

MECHANICAL CHARACTERISTICS

Interfaces (Basic)	
IF input	Type N (F), (F-Type Optional)
RF output	WR75 CPR 137
RF output sample	Type N, available only on 60-400W C-Band BUCs and 80-200W Ku-Band BUCs
M&C – Analogue and RS-485	Military Specification Weatherized Connector
Power Military Specification	Weatherized Connector
Operating Temperature	- 40°C to + 55°C
Storage	- 55°C to + 85°C
Humidity	100%, considering rain 2 inches per hour
Altitude	10000 feet AMSL

L TO KU BAND BUC 8-200W (P1dB) ORDERING INFORMATION

MODEL #	OUTPUT POWER @ P1dB MIN (WATTS/dBm)	WEIGHT (KG/LBS)	DIMENSIONS L, W, H (INCHES)	POWER COMSUMPTION FOR BOOSTER (WATTS)
WTX-FF1FF239-70-ES-XX	8/39	7/15	12x10x8	120
WTX-FF1FF240-70-ES-XX	10/40	7/15	12x10x8	150
WTX-FF1FF241-70-ES-XX	12/41	7/15	12x10x8	170
WTX-FF1FF242-70-ES-XX	16/42	11/25	13x12x8	250
WTX-FF1FF243-70-ES-XX	20/43	11/25	13x12x8	300
WTX-FF1FF244-70-ES-XX	25/44	11/25	13x12x8	350
WTX-FF1FF245-70-ES-XX	30/45	11/25	13x12x8	350
WTX-FF1FF246-70-ES-XX	40/46	15/34	16x13x8	600
WTX-FF1FF247-70-ES-XX	50/47	15/34	16x13x8	700
WTX-FF1FF249-70-ES-XX	80/49	24.5/54	16x11x9	1200 - 220 VAC only
WTX-FF1FF250-70-ES-XX	100/50	33/72	21x15x12	1300 - 220 VAC only
WTX-FF1FF252-70-ES-XX	150/52	50/110	21x15x16	2000 - 220 VAC only
WTX-FF1FF253-70-ES-XX	200/53	50/110	21x15x16	2500 - 220 VAC only

L TO C BAND BUC 60-400W (P1dB) ORDERING INFORMATION

MODEL #	OUTPUT POWER @ P1dB MIN (WATTS/dBm)	WEIGHT (KG/LBS)	DIMENSIONS L, W, H (INCHES)	POWER COMSUMPTION FOR BOOSTER (WATTS)
WTX-FF1FF248-70-ES-XX	60/48	12/27	17.8x8.2x12.3	500
WTX-FF1FF249-70-ES-XX	80/49	12/27	17.8x8.2x12.3	600
WTX-FF1FF250-70-ES-XX	100/50	17/37	22x10x12	750
WTX-FF1FF251-70-ES-XX	125/51	17/37	22x10x12	800 - 220 VAC only
WTX-FF1FF252-70-ES-XX	150/52	17/37	22x10x12	900 - 220 VAC only
WTX-FF1FF253-70-ES-XX	200/53	17/37	22x10x12	1000 - 220 VAC only
WTX-FF1FF254-70-ES-XX	250/54	45/110	24x18x15	1100 - 220 VAC only
WTX-FF1FF255-70-ES-XX	300/55	45/110	24x18x15	1800 - 220 VAC only
WTX-FF1FF256-70-ES-XX	400/56	45/110	24x18x15	2000 - 220 VAC only

*FF1 = low band edge, FF2 = high band edge, XX = Configuration

YOUR DAILY EXPERIENCE POWERED BY MITEC

SALES@MITECTELECOM.COM | WWW.MITECTELECOM.COM | 1-514-694-9000

217024-001PD Rev. 1 12/09

