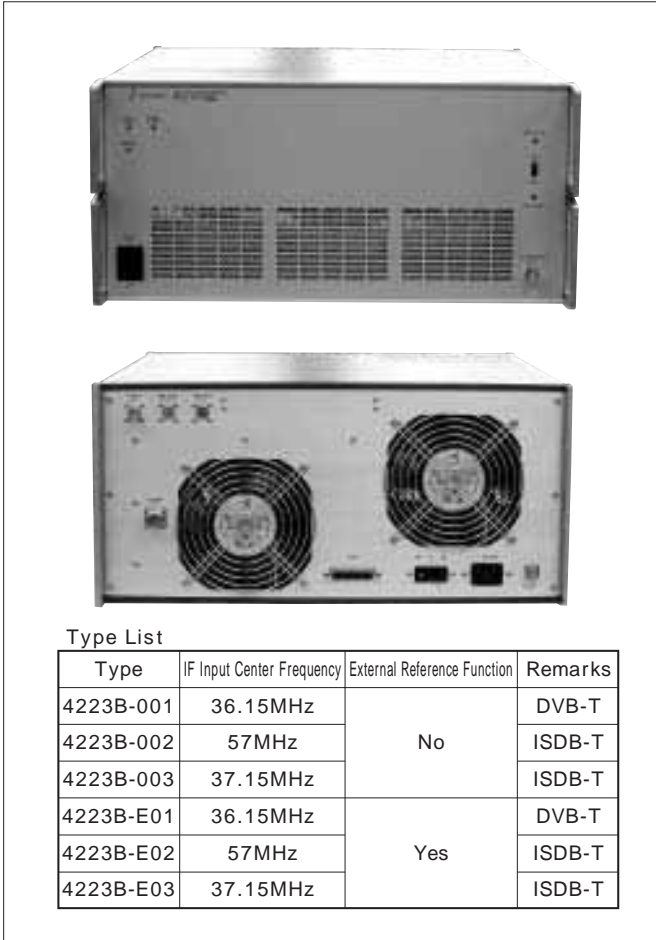


4223B

1W UP CONVERTER

Digital TV development & production facilities



Type List

Type	IF Input Center Frequency	External Reference Function	Remarks
4223B-001	36.15MHz	No	DVB-T
4223B-002	57MHz		ISDB-T
4223B-003	37.15MHz		ISDB-T
4223B-E01	36.15MHz	Yes	DVB-T
4223B-E02	57MHz		ISDB-T
4223B-E03	37.15MHz		ISDB-T

General

This unit is frequency converter to convert IF output signal of ISDB-T/DVB-T OFDM MODULATOR to designated RF frequency. Especially, by taking into account characteristic of OFDM modulation wave required high linearity, enough performance is secured. Also, this unit has 1W output power (Average power), so that it is the most suitable for factory facilities.

Composition

Main Unit	1
Dimensions	425(W) × 199(H) × 480(D) mm (Excluding projections)
Weight	Approx. 23.5 kg
Accessories	
Power Cable (Including 3pin 2pin converter)	1
Rack Mount Adapter	1set
Instruction Manual and Test Result Sheet	1
Power Source	
Input Voltage Allowable Range	: AC90V ~ AC250V (50Hz/60Hz)
Power Consumption	: Approx. 410VA
Operating Environment	
Temperature	: +5 ~ +40
Humidity	: 45% ~ 85%RH (No dew generation)

Rating

- Input
- **Center Frequency**
One of following , and is designated (By type name)
36.15MHz [4223B-001, -E01]
57MHz [4223B-002, -E02]
37.15MHz [4223B-003, -E03]
 - **Input Impedance**
50 (BNC)
 - **Input Level**
- 10dBm ± 2dB (Average power)
 - **Signal Bandwidth**
± 4MHz
- Output
- **Center Frequency**
1 wave designated in 177MHz ~ 887MHz
 - **Output Impedance**

- 50 (N)
- **Output Level**
+ 30dBm (Average power)
- **Output Level Variation**
To be able to set rated level (+ 30dBm)
- **Level Control**
Average AGC (AGC OFF function is provided)
- **Spectrum Polarity**
Invert (Frequency Conversion Polarity)

External Standard Input

- **Frequency**
10MHz ± 5ppm
- **Input Level**
More than 0dBm (Max. + 18dBm)
- **Impedance**
50 /BNC-R
- **Frequency**
10MHz
- **Output Level**
TTL (Equivalent to 74S140)
- **Impedance**
50 /BNC-R

Performance

- **Frequency Response within Band**
Within ± 0.5dB
- **Group Delay within Band**
Within 10nsp-p
- **Cross Modulation Distortion**
Less than - 47dB
@ ISDB-T modulated wave input, at Fo ± 3.3MHz
- **C/No**
More than 125dBc/Hz @2MHz offset
- **Spurious**
Less than - 60dBc (Total power reference)
- **Phase Noise**
Less than - 105dBc/Hz @20kHz OFFSET
- **Frequency Stability**
Within ± 5ppm (At the time of operating with internal reference)
Depending on accuracy of external reference signal when operation is made by external reference.
- **Output Level Stability**
Within ± 1dB
- **Alarm**
This is indicated on front panel with LED. Contact output connector of alarm is equipped on rear panel (D-SUB 25pin Female). Kinds of alarm are as follows.
REFERENCE PLL UNLOCK: PLL is unlocked in operating with external reference.
LOCAL PLL UNLOCK: LOCAL PLL is unlocked.
FAN: Fan motor is abnormal
TEMPERATURE: Inner temperature is abnormal (Over heat)