



## SPECIFICATION

## ISDBT TUNER

## 1.SCOPE

Jdvbt-8076 series is RF unit for Japan and Brazil digital terrestrial broadcast reception.  
Built in OFDM demodulator IC.

## 2.GENERAL SPECIFICATIONS

2-1. RECEIVING FREQUENCY RANGE	VHF HIGH	170~230MHz
	UHF	470~862MHz
2-2. SUPPLY VOLTAGE	:B1	1.2V +/-2% Ripple < 7mV
	B2	5V +/-2%
	B3	3.3V +/-2%
2-3. CONSUMPTION CURRENT	:B1	1.2V 150mA
	B2	5V 30 mA
	B3	3.3V 83 mA

Pin 2 Ant Power is for active Ant. The maximum current shall not exceed 100mA.  
To avoid destroying the components inside the tuner, please offer current limited circuit if you need to supply Pin 2 with current.

2-4. OPERATION AND STORAGE	TEMPERATURE 0~50°C
CONDITIONS FOR GUARANTEE	HUMIDITY 85% OR LESS

## 3.TEST CONDITIONS

## 3-1. TESTING AMBIENT CONDITIONS

DEFINED AS TEMPERATURE OF 25+/-2°C AND HUMIDITY OF 65+/-5% RH.

NOTE : THAT TEMPERATURES OF 5~30°C AND HUMIDITY OF 45~85% MAY BE  
REGARDED AS STANDARD.

**SPECIFICATION**

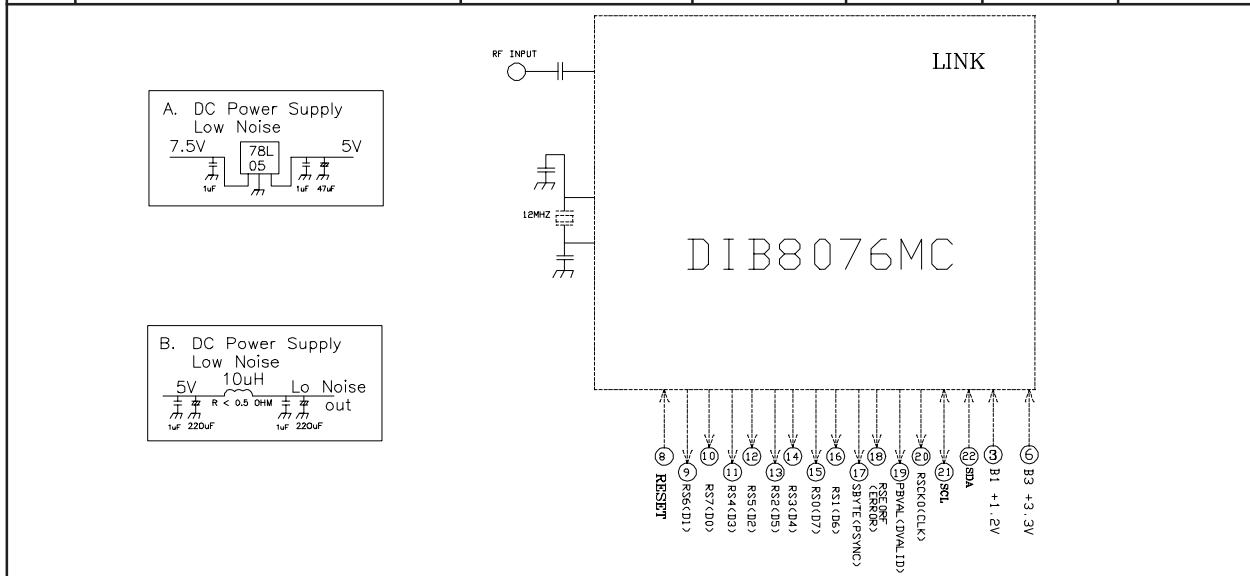
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**4. Electrical Specification**

NO	ITEM	CONDITION	MIN	TYP	MAX	NOTES
4-1.	Frequency range	UHF	470		862	MHz
		VHF HIGH	170		230	MHz
4-2.	Gain	UHF	20		40	dB
		VHF HIGH	25		45	dB
4-3.	Gain step	UHF		0.13		dB
		VHF HIGH		0.13		dB
4-4.	ICP (low gain)	UHF	-15			dBm
		VHF HIGH	-15			dBm
4-5.	ICP (high gain)	UHF	-35			dBm
		VHF HIGH	-35			dBm
4-6.	Input IP3 (low gain)	UHF	-5			dBm
		VHF HIGH	-5			dBm
4-7.	Input IP3 (high gain)	UHF	-25			dBm
		VHF HIGH	-25			dBm
4-8.	Noise Figure	UHF		3		dB
		VHF HIGH		3		dB
4-9.	Zin	UHF		50		ohm
		VHF HIGH		50		ohm
4-10.	MAX RF input 64 QAM	UHF	-115		-30	dBVrms
		VHF HIGH	-115		-30	dBVrms

**5.0 Electrical Characteristics Control refer to DIB8076MC data sheet**

5.1	C/N in AWGN 6MHz,G1/4,RF=50dBm RS uncorrected error=0	8K 64QAM R7/8		21.5		dB
		8K 16QAM R1/2		10		dB
5.2	Sensitivity in AWGN 6MHz,G1=1/4 RS uncorrected error=0	8K 64QAM R7/8		-75		dBm
		8K 16QAM R1/2		-80		dBm



**SPECIFICATION****ISDBT TUNER****7. Electrostatic discharge****6.1 Test**

Each front-end must be capable of normal performance following its subsection to the following tests:

**MIL STD 883C HBM**

Test is performed with a voltage discharge from a 100 **PF** capacitor over a 1500 **OHM** series resistance in the discharge path. There is a direct contact between the test probe head and the unit under test, using the test points and conditions detailed below:

- o Test to pins 1 through 22:  
3 successive ESD discharges of **+/-2 KVDC** between each pin and the front-end frame.

**IEC 1000-4-2**

Test is performed with a voltage discharge from a 150 **PF** capacitor over a 330 **OHM** series resistance in the discharge path. There is a direct contact between the test probe head and the unit under test, using the test points and conditions detailed below:

- o Test for antenna input socket **+/-2 KVDC**

**6.2 Handling**

Anyone handling a front-end must wear a properly grounded anti-static discharge bracelet to minimize **ESD** damage.

After each front-end is aligned and tested, it will be packed with anti-static material prior to transportation and storage. This package is to remain in place until the front-end is assembled and soldered onto the receiver main board.

**SPECIFICATION****ISDBT TUNER****7 Reliability test procedure & conditions**

Note: Room temperature = 25°C +/- 2°C

**7.1 Heat load test**

- o Measure the DUTs at room temperature
- o Load the DUTs into chamber of the following conditions:

Temperature = 60 °C  
Period = 500 hrs  
Cycle = 1.5 hrs on; 0.5 hrs off  
Quantity = 10 pcs

- o Cool-down 0.5 hr at room temperature, then measured the DUTs within 1 hr
- o The test shall be continued to 1000 cycles for information only

**7.2 Humidity load test**

- o Measure the DUTs at room temperature
- o Load the DUTs into chamber of the following conditions:

Temperature = 40 +/- 5 °C  
Period = 24 hrs  
Cycle = constantly on  
Quantity = 24 pcs

- o Cool-down 0.5 hr at room temperature, then measured the DUTs within 1 hr
- o Load the DUTs again into chamber of the following conditions:

Temperature = 40+/-5°C  
Humidity = 90 to 95%  
Period = 500 hrs  
Cycle = 1.5 hrs on; 0.5 hr off  
Quantity = 20 pcs

- o Cool down 0.5hr at room temperature, then measured the DUTs within 1 hr



**SPECIFICATION****ISDBT TUNER****7.6 Vibration test**

- o Frequency: 3.5 Hz
- o Vertical amplitude: 15 to 25 mm
- o Duration: 1 hr
- o Quantity: 1 carton

**7.7 Drop test**

- o Packaged apparatus: <or = 50 kg
- o Height: depend on weight
- o 1 corner + 3 edger + 6 faces

Drop on the weakest corner ( point G )

Drop on the shortest edge on contact with point G

Drop on average edge in contact with point G

Drop on the longest edge in contact with point G

Drop flat wise on the side of minimum surface

Drop flat wise on the side of opposite minimum surface

Drop flat wise on the side of average surface

Drop flat wise on the side of opposite average surface

Drop flat wise on the side of maximum surface

Drop flat wise on the side of opposite maximum surface

- o Quantity :1 carton

**7.8 Life test**

- o Measure the DUTs at room temperature
- o Load the DUTs into chamber of the following conditions:

Temperature = 60 °C

Period = 500 hrs

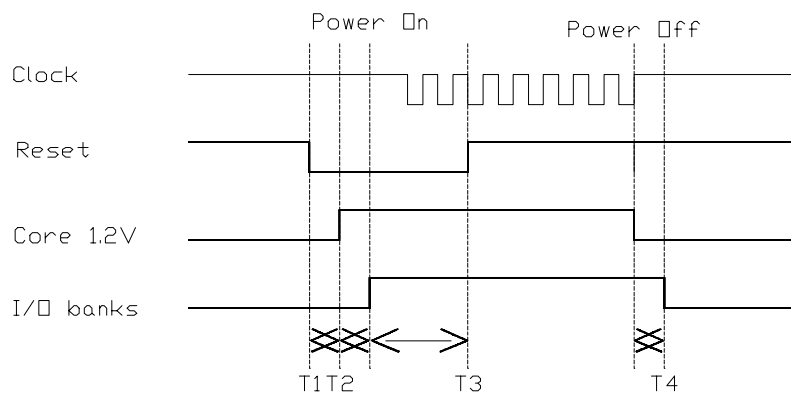
Cycle = constantly on

Quantity = 20 pcs

- o Cool down 0.5 hr at room temperature, then measured the DUTs within 1hr

**SPECIFICATION**

**ISDBT TUNER**



power on and off sequence

1. DiB IC can support I2C clock up to 1MHZ
2. After reset release,you can send immediatly I2C messages.Maybe wait 1-2 clock cycle before sending I2C message,just to be sure.
3. The only limit is  $T3 > 10ms$ .

