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Preliminary datasheet TX-AUDIO-2.4

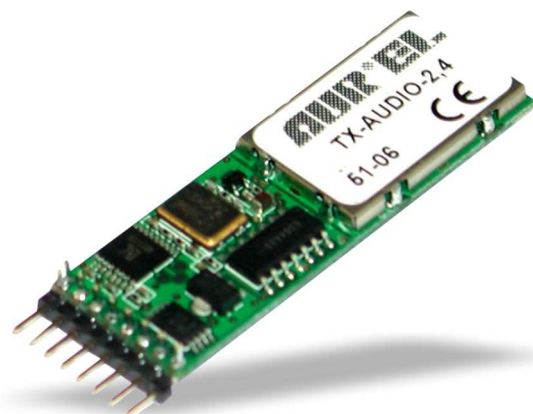
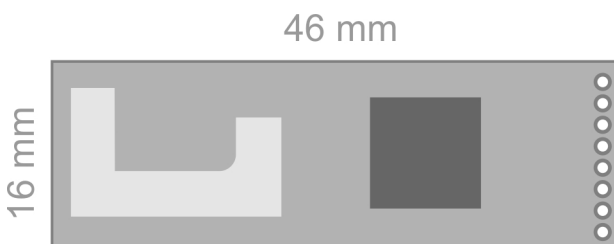
Features

- 1.Non-compression for high sound quality with delay time 0.5 ms.
- 2.Digital audio with 44.1 KHz sampling rate and 16-bit resolution.
- 3.FSK digital modulation
- 4.Embedded antenna for cost-effect and fast development
- 5.8 selectable channels
- 6.Low power consumption for mobile application

Specification

Model	TX-AUDIO-2.4
Supply voltage	3.6 ÷ 5 Vdc
Current consumption	93 mA (typ)
Operating temperature	-10 ÷ +60 C
Frequency range	2400 ÷ 2483.5 MHz
Modulation	FSK
Channel number	8
Channel spacing	9 MHz
Frequency stability	± 100 KHz
TX power	+10 dBm
Input impedante	> 10 Kohm
Input level	4 Vpp (max)
Response	20 Hz ÷ 20 KHz
Dynamic range	92 dB (typ)
Separation	80 dB (typ)
SN ratio	87 dB (typ)

Board dimension



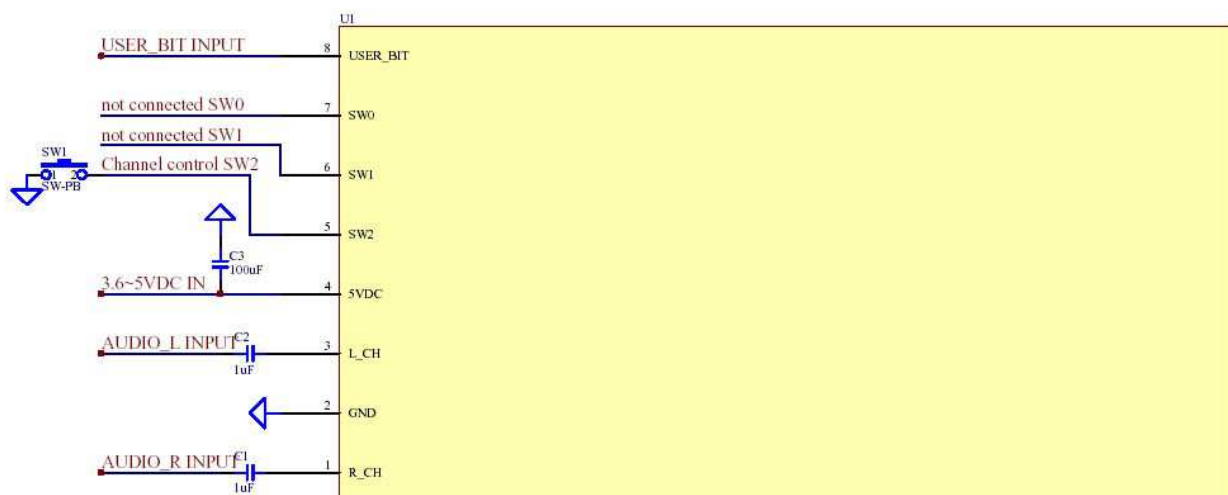
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Pin configuration

Pin #	Pin name	Pin description
1	R_CH	Audio R channel
2	GND	Ground
3	L-CH	Audio L channel
4	5Vdc	3.6 ÷ 5 Vdc
5	SW	Switch
6	N.C.	Not connected
7	N.C.	Not connected
8	USER_BIT	Maximum data 5Kbps (input)

Application circuit

Application circuit for TX module



1.C1 and C2 are both DC blocking capacitors for audio R and L inputs respectively. 1 uF capacitors for C1 and C2 will be sufficient for general applications because the input impedance of the A/D converter is greater than 10K ohm. If further audio low frequency response is wanted, C1 and C2 can be increased to get more extension.

2.C3 is the DC power supply decoupling capacitor. In general a 100 uF capacitor can work well.

3.SW is used to select the channel

4.As to the user_bit, one can provide a data sequence defined by the user to this pin and this data sequence will be delivered and received at the Rx module.

Application information

When you design the transmitter module in wireless speakers and headphones, pay attention to the following considerations:

1. Do not bend down or up the antenna.
2. Do not let any metal objects too close to antenna.
3. Transmitter module must be kept away from speaker over 3 cm to avoid magnetic interference.
4. Power supply to transmitter module must be independent, different from the power of amplifier.
5. Avoid to put any cable or circuit nearby antenna (1-2 cm).

