

UHF Multi Channel Wireless Audio Transmitter/Receiver

WA-TX-03-R / WA-RX-03-R 863MHz

The WA-TX-03-R / WA-RX-03-R are 15ch multichannel audio modules that operate in the European harmonized 863 - 865 MHz band. In addition to offering a frequency response range sufficient for voice transmission, the compander noise reduction system has a wide dynamic range, enabling transmission of clear audio signals. As embedded devices, they include nearly all the parts necessary for audio transmission in a small shielding case, making it possible to develop audio transmission equipment in a short time.

Feature

- 863 - 865 MHz European audio band
- 15 channels with 125 kHz
- Built in noise reduction systems
- Built in mute circuit
- Easy installation for user system
- R&TTE (EN 300 422 / EN 301 357) / RoHS compliance

Application

- Audio guiding at museum
- Tour guide system
- Wireless conference system
- Wireless microphone system for amateur users
- Various audio transmissions



Common

Item	Specification
Frequency	863 - 865 MHz
Number of RF channels	15
Frequency Type	F3E
Modulation	FM
Distance	50 m (line of sight)
Dynamic range	80 dB or more (W/IHF-A Filter)
Audio Frequency response	50 Hz to 13 kHz +/-3.5 dB
T.H.D	2 % or less (@AF 1 kHz, Dev.= 15 kHz)
Emphasis	50 us
Operating temperature	0 to 50 degree C

WA-TX-03-R

Item	Specification
Oscillation type	Crystal based PLL oscillation
RF power	5 mW (contact)
Frequency stability	+/-15 kHz
Noise reduction type	Compander
Spurious emission	1 uW Max.
Deviation	15 kHz (1kHz@-25dBv)
Audio input level	- 95 to -15 dBv (1kHz)
Audio input impedance	20 kohm or more
Max.DC input to audio input	10 V DC Max.
Supply voltage	3 to 5 V
Current consumption	70 mA
Dimensions (WxDxH)	36 x 26 x 8 mm
Weight	TBD g

WA-RX-03A-R

Item	Specification
Receiving method	Single super heterodyne
Local oscillation type	Crystal based PLL oscillation
IF frequency	10.7 MHz
Noise reduction type	Expander
Sensitivity	S/N 55 dB at 21 dBuV (-92 dBm)
Squelch sensitivity	by volumn
Audio output level	-10 dBv (Dev. 20 kHz),
Audio output impedance	20 kohm or less
Supply voltage	3 to 5 V
Current consumption	45 mA
Dimensions (WxDxH)	36 x 26 x 8 mm
Weight	TBD g

Specifications are subject to change without prior notice

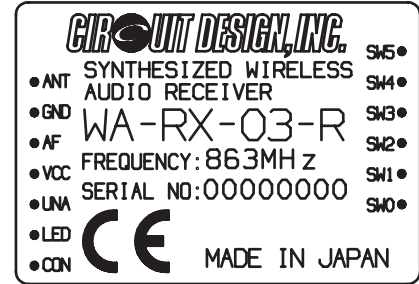
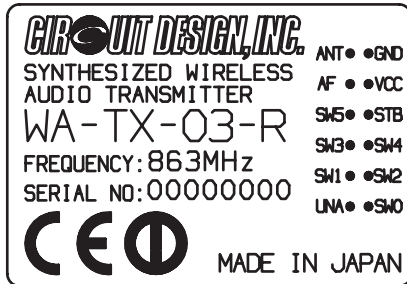
*0dBv =0.775V

*Data of specification is measured at 25C unless otherwise specified.

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Pin description



Preliminary

Name	Description
UNA	Indicator for unavailable channel High when unavailable channel is selected. LED can be driven directly
SW0	Frequency channel setting Select a channel within 15-programmed channels SW4 and SW5 will not be used (NC).
SW1	
SW2	
SW3	
SW4	
SW5	
STB	StandBy terminal (with power off delay) +3 V or higher voltage activate the transmitter Transmitter start up time is 2 +/- 0.5 ms after S-B terminal become high Down time (internal circuit voltage become 50%) is 1 +/- 0.5 ms after S-B terminal become low
AF	Audio input terminal Audio input level range is -95 dBv to -15 dBv. Maximum DC input voltage is 10 V. Driving impedance should be 20 kohm or less
VCC	Power supply terminal (+) Voltage range is DC 3 to 5 V
ANT	Antenna terminal (RF output)
GND	Common ground terminal for RF out and Vcc

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SW0	Frequency channel setting Select a channel within 15-programmed channels SW4 and SW5 will not be used (NC).
SW1	
SW2	
SW3	
SW4	
SW5	
ANT	Antenna terminal
GND	Common ground terminal for RF in and Vcc
AF	Audio output terminal Output impedance is 20 kohm
VCC	Power supply (+) Voltage range is DC 3 to 5 V
UNA	Indicator for unavailable channel High when unavailable channel is selected. LED can be driven directly
LED	Indicator for MUTE Low when MUTE is active
CON	Squelch level control terminal

Frequency table

CH No.	0	1	2	3	4	5	6	7
Frequency	Unavailable	863.125	863.250	863.375	863.500	863.625	863.750	863.875
CH No.	8	9	10	11	12	13	14	15
Frequency	864.000	864.125	864.250	864.375	864.500	864.625	864.750	864.875