

## UHF Wireless Audio Transmitter/Receiver

# WA-TX-01-R / WA-RX-01A-R

Transmitter WA-TX-01-R and receiver WA-RX-01A-R are RF modules that transfer audio (analog) signal in 863-865MHz European audio bands. All necessary circuits from RF part to noise reduction system are in a compact case for easy integration to user applications. WA-TX-01-R and WA-RX-01A-R has wide dynamic range (100dB) to realize high quality sound transmission. The system adopts a compander/expander noise reduction system. In addition, outstanding feature of WA-TX-01 is low voltage, low current and compact size. It is achieved by a high stability SAW resonator technology. WA-TX-01 is optimal transmitter for integration into a user system requiring a small space and battery powered portable operation. 4 channels are available for simultaneous system operation in one site.

### Feature

- 100dB wide dynamic range with noise reduction system
- Frequency response from 50Hz to 15kHz
- Fixed frequency in 863-865MHz European audio band
- Low current for longer battery life (TX: 25mA Max.)
- Single UM4 (1.5V) battery operation with DC/DC converter
- Built in mute circuit
- All functions in a compact case (TX: 27X19X5.5mm)
- Easy installation for user system
- R&TTE (EN 300 422 / EN 301 357) / RoHS compliance

### Application

- Wireless microphone system
- Wireless portable sound system
- Audio guidance system (Museum tour guide etc.)
- Wireless conference system
- Hall sound reinforcement system
- Sound/voice monitor



### Common

| Item                     | Specification                                      |
|--------------------------|--|
| Frequency                | 863.125, 863.625, 864.500, 864.875MHz              |
| Number of RF channels    | Single (Fixed)                                     |
| Frequency Type           | F3E  |
| Distance                 | 50m (line of sight)                                |
| S/N ratio                | 90dB (W/IHF-A Filter)                              |
| Audio Frequency response | 50Hz to 15kHz +/-3.5dB (Output level -50dBv+/-3dB) |
| T.H.D                    | 2% (@AF 1kHz, Dev.=15kHz or 7.5kHz)                |
| Emphasis                 | 50u/sec  |
| Operating temperature    | 0 to 50 degree C                                   |

### WA-TX-01-R

| Item                        | Specification                 |
|-----------------------------|-------------------------------|
| Oscillation type            | SAW Oscillator crystal based  |
| RF power                    | 2mW                           |
| Modulation                  | Variable reactance modulation |
| Frequency stability         | +/-10kHz                      |
| Pre-emphasis                | 50uSec                        |
| Noise reduction type        | Compander                     |
| Spurious emission           | 1uW Max.                      |
| Deviation                   | 15kHz (1kHz@-25dBv)           |
| Audio input level           | -115 to -15 dBv (1kHz)        |
| Audio input impedance       | 5 kohm                        |
| I/O connector               | 4P connector                  |
| Max.DC input to audio input | 0V DC Max.                    |
| Supply voltage              | 3 to 9V                       |
| Current consumption         | 25mA Max.                     |
| Dimensions                  | W27 x D19 x H5.5mm            |
| Weight                      | 5 g                           |

### WA-RX-01A-R

| Item                   | Specification                                  |
|------------------------|--|
| Receiving method       | Single super heterodyne                        |
| Local oscillation type | Crystal controlled                             |
| Oscillation frequency  | (f0-10.7MHz)/10                                |
| IF frequency           | 10.7MHz  |
| Noise reduction type   | Expander                                       |
| Sensitivity            | 21dBuV (@THD2%)                                |
| Squelch sensitivity    | 17dBuV +/- 4dB                                 |
| Audio output level     | -20 dBv (Dev. 15kHz),<br>Max-10dBv (Dev.30kHz) |
| Audio output impedance | 10 kohm (Unbalanced output)                    |
| I/O connector          | 6P connector                                   |
| Supply voltage         | 3 to 12V                                       |
| Current consumption    | 30mA   |
| Dimensions             | W36 x D26 x H8 mm                              |
| Weight                 | 15g  |

\*0dBv =0.775V

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

Specifications are subject to change without prior notice

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