

AM-RT4-XXX AM-RT5-XXX AM-RTQ4-XXX AM-RT14-XXX

Features

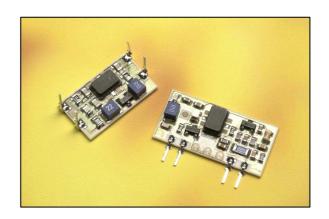
- Complete RF Transmitter
- CMOS / TTL Input
- No Adjustable Components
- Very Stable Operating Frequency
- Low Current Consumption
- Low Spurious Emissions

Applications

- Wireless Security Systems
- Car Alarms
- · Remote Gate Controls
- Remote Sensing
- Data Capture
- Sensor Reporting

RT4 / RT5

- Available as 315, 418, 433 MHz
- Range up to 70 metres
- Available In DIL or SIL Package
- Wide Operating Voltage



RTQ4 / RT14

- High Output Power
- Range 100+ metres
- Available as 433, 868 MHz

Description

The R F Solutions Ltd. AM hybrid transmitter module provides a complete RF transmitter which can be used to transmit data at up to 4KHz from any standard CMOS/TTL source.

The module is very simple to operate and offers low current consumption (typ. 4 mA). Data can be supplied directly from a microprocessor or encoding device, thus keeping the component count down and ensuring a low hardware cost.

The module exhibits extremely stable electronic characteristics due to the use of 'Thick-Film' hybrid technology, which uses no adjustable components and ensures very reliable operation.

The modules are compatible with R F solutions Ltd. range of AM receivers to provide a complete solution.

Ordering Information

| Part Number | Description |
|----------------|--|
| AM-RT4-XXX | DIL AM Transmitter Module XXX MHz |
| AM-RTQ4-XXX | DIL AM Transmitter Module XXX MHz |
| AM-RT5-XXX | SIL AM Transmitter Module XXX MHz |
| AM-RT14-XXX | DIL AM Transmitter Module XXX MHz, SAW Resonator |
| AM-RT14-XXX-SO | SMT AM Transmitter Module XXX MHz, SAW Resonator |

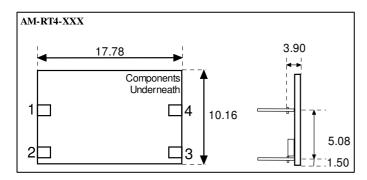
Frequency Availability

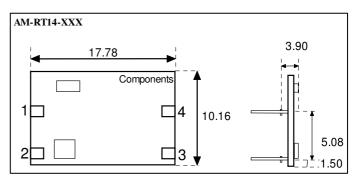
RT4 / RT5: XXX = 315, 418, 433MHz Other Frequencies available on request RTQ4: XXX = 868MHz Other Frequencies available on request AXX = 433MHz Other Frequencies available on request Other Frequencies available on request AXX = 433MHz

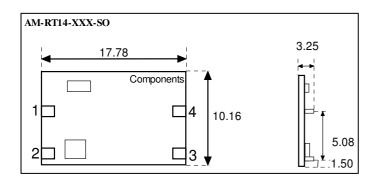


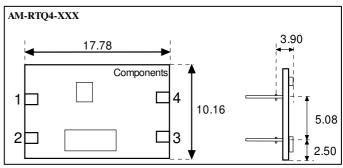
DS013-7

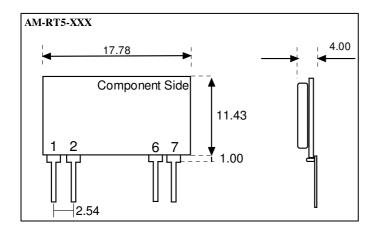
Mechanical Dimensions











Notes

Pins on 0.1" pitch

Pin Dimensions: 0.25 x 0.50mm

All measurements in mm

Tolerance: +/- 0.2mm

The component side differs depending on module

Pin Descriptions

| = 0000pto0 | | | |
|-------------------|-----|------|---|
| RT4 / RTQ4 / RT14 | RT5 | Name | Description |
| 1 | 7 | Vcc | Supply Voltage |
| 2 | 6 | GND | Ground, Connect to RF earth return path |
| 3 | 2 | IN | Data input |
| 4 | 1 | ANT | External Antenna |

DS013-7

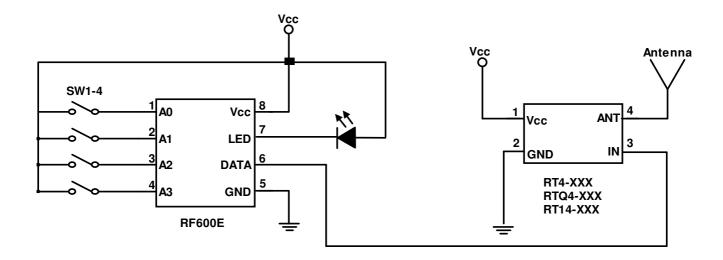


AM-RT4-XXX AM-RT5-XXX AM-RTQ4-XXX AM-RT14-XXX

Typical Application

For further information on this circuit please see datasheet DS600

Transmitter Circuit



AM-RT4-XXX AM-RT5-XXX AM-RTQ4-XXX AM-RT14-XXX

RT4/RT5: Electrical Characteristics

| Characteristic | Min. | Тур. | Max. | Dimensions |
|---|-------|------|--------|------------|
| Supply Voltage | 2 | | 14 | Vdc |
| Supply Current (Vcc=5V IN=1kHz) | | 4 | | mA |
| Supply Current (Vcc=5V IN=DC GND) | | 50 | | nA |
| Working Frequency | 303.8 | | 433.92 | MHz |
| Frequency Tolerance | | | +/-100 | KHz |
| RF Output Power into 50Ω (Vcc=5V) | | 0 | | dBm |
| Harmonic Spurious Emissions | | -30 | | dBc |
| Input Voltage High | 2 | | Vcc | V |
| Time from Power on to data transmission | | 10 | | μSec |
| Data Rate | 50 | | 9,600 | Hz |
| Operating Temperature | -25 | | +80 | ∞ |

RTQ4: Electrical Characteristics

| Characteristic | Min. | Тур. | Max. | Dimensions |
|-----------------------------------|---------|--------|-------|------------|
| Supply Voltage | 1.9 | | 5 | Vdc |
| Supply Current (Vcc=5V IN=1kHz) | | 12 | | mA |
| Working Frequency | | 868.35 | | MHz |
| Frequency Tolerance | -35 | | +35 | KHz |
| RF Output Power into 50Ω (Vcc=4V) | +5 | +7 | | dBm |
| Harmonic Spurious Emissions | | -50 | | dBc |
| Input Voltage High | 0.7*Vcc | | | V |
| Power-Up | | | 1 | mSec |
| Data Rate | 50 | | 9,600 | Hz |
| Operating Temperature | -25 | | +80 | ℃ |

RT14: Electrical Characteristics

Ambient temp = 25 ℃ unless otherwise stated.

| Characteristic | Min. | Тур. | Max. | Dimensions |
|-----------------------------------|------|--------|-------|------------|
| Supply Voltage | 2 | | 9 | Vdc |
| Supply Current (Vcc=5V IN=1kHz) | | 8 | | mA |
| Working Frequency | | 433.92 | | MHz |
| RF Output Power into 50Ω (Vcc=4V) | +10 | +12 | | dBm |
| Harmonic Spurious Emissions | | -55 | | dBc |
| Input Voltage High | 2 | | Vcc | V |
| Data Rate | 50 | | 9,600 | Hz |
| Operating Temperature | -25 | | +80 | °C |

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