

RADIO MODULE
MTX-ASW-S

UHF AM TRANSMITTER MODULE

PRELIMINARY

DATA SHEET

Radios, Inc

May 20, 2010 Preliminary Data Sheet

MTX-ASW-S

UHF AM TRANSMITTER MODULE

Description:

The MTX-ASW-S is an OOK/ASK transmitter with adjustable output power operating at 315, 390, 418, and 433 MHz. This integrated modularized transmitter is primarily intended for use in Part 15.231 systems and supports on-off keyed (OOK) and amplitude-shift keyed (ASK) modulation. An external antenna is the only component required therefore the transmitter is easily integrated with other applications. The transmitter is cost effective and small in size making it perfect for remote control applications. It is a highly reliable wireless link with easy to control output power.



Key Features:

- Low cost, long range OOK/ASK transmitter
- Supports On-Off Key (OOK) and Amplitude-Shift Key (ASK) modulation
- Low power consumption
- 3-5V operation
- Baud rate up to 4800 BPS
- Stable SAW-based architecture
- Small size
- No production tuning

Typical Applications:

- Remote controls
- Garage openers / Gate controls
- Keyless entry
- Lighting control
- Home / Industrial automation
- Continuous / Periodic data transfer
- Remote access
- Domestic / Commercial security
- Fire / Security alarms
- Long-range RFID
- General wire elimination
- Asset tracking

Product Order Information

Part Number	Description
MTX-ASW-315S	315 MHZ OOK/ASK Module Transmitter
MTX-ASW-390S	390 MHZ OOK/ASK Module Transmitter
MTX-ASW-418S	418 MHZ OOK/ASK Module Transmitter
MTX-ASW-433TS	433.92MHZ OOK/ASK Module Transmitter



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General Information:

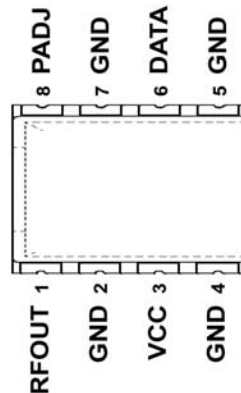
- 1.) The MTX-ASW-S incorporates a bandpass filter, external adjustable output power and a 50 ohm antenna port. Also, a SAW-stabilized, negative impedance-base oscillator is included in the design.
- 2.) The MTX-ASW-S is designed to be used in combination with a MRX-ASW receiver.

Implementation Requirements:

The MTX-ASW-S requires +2.7-5 volt power, RF and data ground, data input and an external antenna.

Pin Description		
Pin Name	Pin Type	Notes
Pin 1	RFOUT	RF Output
Pin 2	GND	RF Ground
Pin 3	VCC	Positive supply pin
Pin 4	GND	Data Ground
Pin 5	GND	Ground
Pin 6	DATA	Data Input
Pin 7	GND	Ground
Pin 8	PADJ	Power Control

Pin Diagram



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Electrical Limits

Sym	Parameters	Min	Typ	Max	Unit	Notes
	Supply Voltage	-0.2		5.8	V	
	Operating temperature	-30		70	°C	
	Storage temperature	-45		85	°C	
	RF Power Dissipation		0		dBm	

Electrical Characteristics

This device is ESD sensitive. Do not operate or store near strong electrostatic fields. Use appropriate ESD precautions. All voltages are with respect to Ground.

Parameters	Min	Typ	Max	Unit	Notes
Operating Temperature Range	27		5.3	V	
Supply Current	1		12	mA	
Sleep Current			1.5	µA	
Working Frequency	315		433.92	MHz	
Overall Frequency Accuracy	-100		100	kHz	
RF Output Power			10	dBm	
Harmonic Spurious Emission		TBD		dBc	
Max Data Rate			4.8	Kbps	
Operating Temperature Range	-25		80	°C	
Oscillator Start-up Time			80	µS	
Oscillator Ring-down Time			100	nSec	

Note 1: Exceeding the absolute maximum ratings may damage the device.

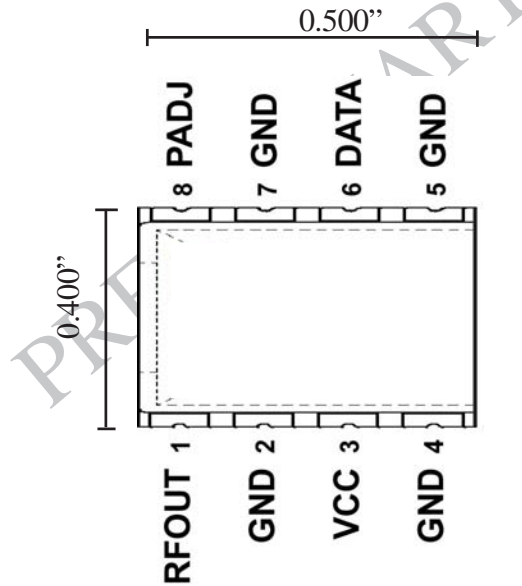
Note 2: The device is not guaranteed to function outside its operating ratings.

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Physical Packaging:

Mechanical Dimensions



Spacing Between Pins is 0.050"

Space after pins 1, 4, 5, and 8 till edge of board is 0.010"

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Product Warranty and Disclaimer Information:

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Technical Support:

Radios Inc. is committed to providing its customers with excellent technical support and the resources necessary to assist its customers with their product development. Customers have several options to obtain assistance. First, any questions or concerns can be e-mailed to Radios Inc. at information@radiosinc.com. We monitor our e-mail daily, and will respond to all questions promptly. Additionally, to speak directly to a technical support representative, customers may call Radios Inc. at 215-362-1899.

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Editorial Information:

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