RFTQ1 Crystal Controlled PLL FM Transmitter Modules
RFTQ2

- FM Radio Transmitter Modules
- Available in 315 or 433 or 868MHz
- Transmit Range Up To 700ft
- Miniature Packages
- Data Rate up to 9.6Kbps
- No Adjustable Components
- Very Stable Operating Frequency
- Operates from –20 to +85^{0}C
- 3-12 V Operation (RFTQ2)
- 3V Operation (RFTQ1)
- SIL (RFTQ2) Package or DIL (RFTQ1) Package

RFTQ2-xxx

A Single in Line Package incorporating a voltage regulator for 3-12V operation. (Compatible with many other RF transmitter modules available as a drop-in alternative and therefore ideal for comparative evaluation)

Applications

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

RFTQ1-xxx

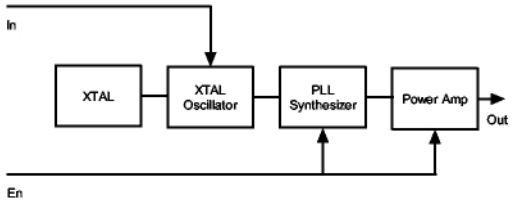
A Dual in Line Package operating at 3.3V. This provides the most rugged mechanical fixing to the host PCB. Power Down mode is also available.

Description

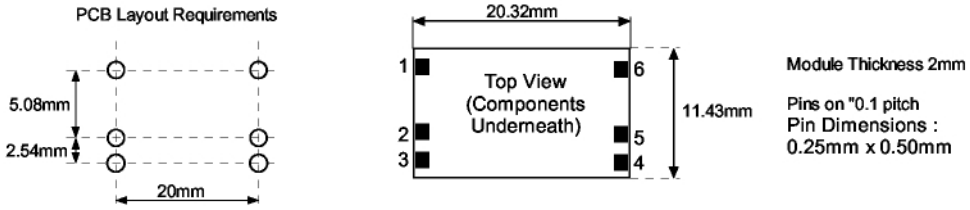
These miniature RF modules provide a cost effective high performance FM Radio data link, at either 315, 433.92 or 868MHz. Manufactured using laser trimmed Thick Film Ceramic Hybrid the modules exhibits extremely stable electronic characteristics over an Industrial Temperature range. The hybrid technology uses no adjustable components and ensures very reliable operation.
This transmitter and receiver pair enables the simple implementation of a data link at distances up to 200ft in-building and 700ft open ground.

These RF modules will suit one-to-one and multi-node wireless links in applications including car and building security, EPOS and inventory tracking, remote industrial process monitoring and computer networking. Because of their small size and low power requirements, both modules are ideal for use in portable, battery powered applications such as hand-held terminals.

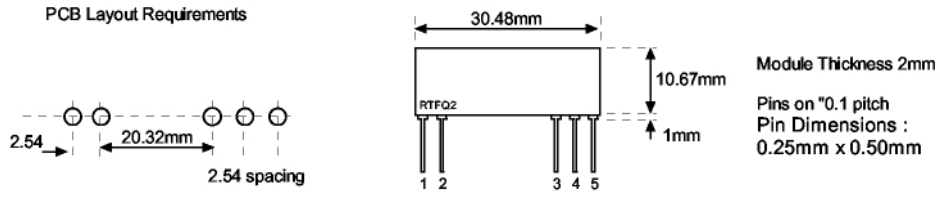
Transmitter Block Diagram



RTFQ1 Mechanical Dimensions



RTFQ2 Mechanical Dimensions



Pin Description

RTFQ1	RTFQ2	Name	Description
1	N/A	En	Enable (active high)
2	5	IN	Data input
3	1	GND	Ground, Connect to RF earth return path
4	3	Vcc	Supply Voltage
5	4	GND	Ground, Connect to RF earth return path
6	2	EA	External Antenna

Specifications

Electrical Characteristics	MIN	TYPICAL	MAX	DIMENSION
Supply Voltage RTFQ1	2.1	3.3	4.00	V
Supply Voltage RTFQ2	2.5		12.00	V
Supply Current		7	8	mA
Standby Current (IN = EN = Low)			100	nA
Frequency		315.0 433.92 868.35		MHz
RF Output into 5052 (Vcc=3.3V)		+5 / +5 / +1		dBm
Initial Frequency Accuracy	-35	0	+35	KHz
FM Deviation	25	30	35	KHz
Harmonic Spurious Emissions		-50		dBc
Input High Voltage RTFQ1	1.5		Vcc	V
Input High Voltage RTFQ2	1.5		5.5	V
Power up Time (En to full RF)			1	mS
Power up Time (Power on to full RF)			5	mS
Max Data Rate			9.6	KHz
Operating Temperature	-25		+80	°C