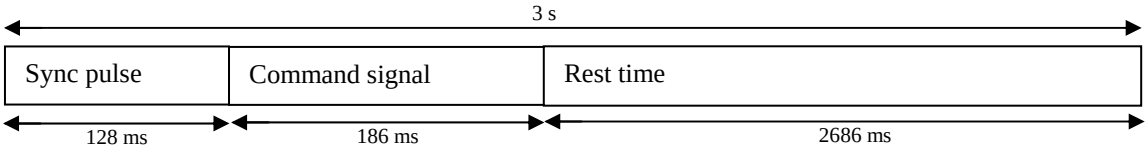
FCC ID: VN702030PM-TX

Technical Description :

The brief circuit description is listed as follows :
- U1 (GPC11033A) and associated circuit act as Sound Controller.
- IC1 (LW203) and associated circuit act as 915 MHz ASK Module.
- SAW1 and associated circuit act as 915 MHz Oscillator.
- Q1 and associated circuit act as TX Power Controller.
- Q2 and associated circuit act as Mic Contoller.
- Q3, Q4 and associated circuit act as Audio Amplifier.
- PB1, PB2, PB4 – PB7 and associated circuit act as Control Key.

Frame structure:



In the worst case of the data signal, the first 128ms is a Sync pulse “10101010.....”; the “ON” time is 64ms and the Duty Cycle is 50%. For the other 186ms, this is a command signal which also smaller than 50% “ON” time. The time duration for one signal is 314ms and the time duration between two signal is 3 second.

Antenna Used :

An internal antenna has been used.

LW203 300-900MHz ASK Transmitter
Preliminary DataSheet
Subject to change without prior notice

Rev 0.2, December, 2008

Introduction

LW203 is single chip AM transmitter system designed for ASK communication systems. It includes a Colpitts oscillator, an optional RF power amplifier. Targeted applications are in the frequency band from 300MHz to 900MHz. By using an appropriate SAW resonator, LW203 can support both 315/433MHz and 886/915MHz UHF bands for ASK communication at low cost without any tuning. It is a complementary chip to Lexiwave's LW103 ASK receiver chip to form a complete RF solution for ASK communication.

Features

- Frequency range from 300 MHz to 900 MHz
- Optional RF power amplifier
- Low power consumption
- Operate from -20°C to 85 °C
- Only require a few inexpensive external components
- No tuning and no programming
- Low cost
- QFN-16L package or die form for PCB bonding

Applications

- 315/433MHz or 886/915MHz Band Systems
- Remote controllers
- Security systems such as car alarm
- Wireless door bell
- Garage opener
- radio controlled toys
- Monitoring systems
- Local Oscillator Source
- Remote Fan/Light Control

AC Electrical Characteristics

Characteristics	Minimum	Typical	Maximum	Unit
Output power (at 50 ohm)				
With PA	-	3	-	dBm
Without PA	-	-2	-	

Functional Descriptions

LW203 includes an RF oscillator and an optional RF power amplifier. With using an appropriate SAW resonator, the RF oscillator can be configured as a Colpitts oscillator to form a tuning-free and highly stable RF oscillator at 315/433/886/915 MHz. The output power of the Colpitts oscillator is about -2 dBm at 50-ohm load. ASK modulation can be accomplished by applying digital data at the oscillator input. For higher output power, the RF power amplifier can be connected to the Colpitts oscillator output. The power amplifier also serves as an isolation buffer to minimize frequency pulling or oscillation ceasing due to the near-object effect caused by the antenna.