

KT-18 CHARACTERISTICS

1 RF MODULE

INTERNAL CIRCUIT OPERATES ON 3V

PIN No.	NAME	I/O	CONTENTS
1	3V	I	VDD INPUT
2	3V/5V	I	VDD INPUT
3	TH INC	I	THROTTLE INC TRIM INPUT
4	TH DEC	I	THROTTLE DEC TRIM INPUT
5	LOW BAT	I	BATTERY VOLTAGE CHECK
6	ST TRIM	I	STEERING TRIM VOLTAGE INPUT
7	BUZ	O	BUZZER OUTPUT
8	LED	O	LED OUTPUT
9	TH	I	THROTTLE VOLTAGE INPUT
10	ST	I	STEERING VOLTAGE INPUT
11	SIN	I	NOT IN USE. MUST PULL UP
12	SOUT	O	NOT IN USE
13	RES	I	RESET INPUT(INTERNAL PULL UP)
14	GND	I	GND

GENERAL CHARACTERISTICS

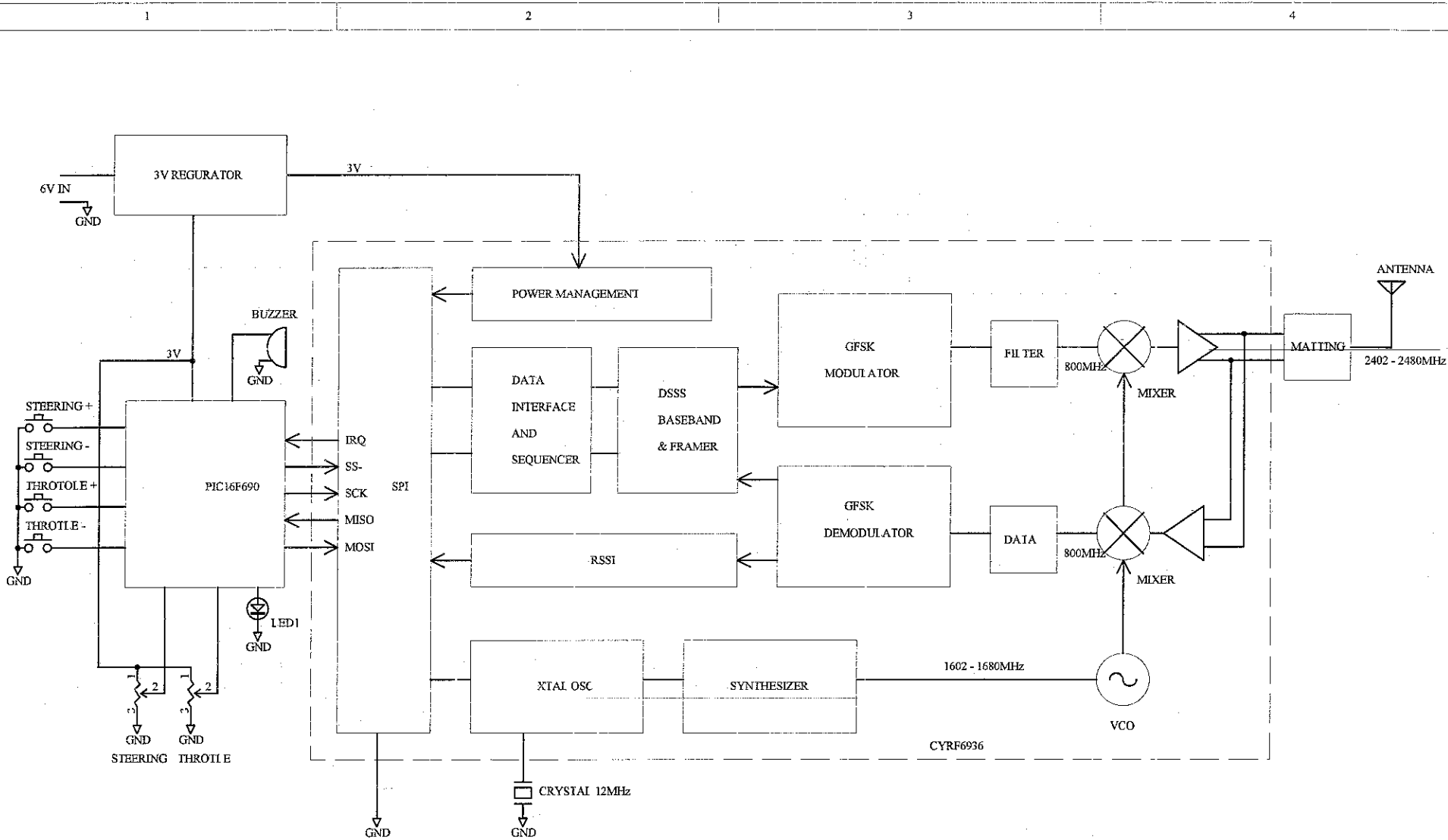
ITEM	RATING	NOTE
COMMUNICATION METHOD	SIMPLEX	
FREQUENCY METHOD	FSK	
OSCILLATION METHOD	PLL CONTROLLED VCO	
FREQUENCY RANGE	2404 - 2480MHz	TRANSMISSION
CHANNEL STEP	2MHz	
NUMBER OF CHANNEL	39CHANNELS	
TRANSMISSION SPEED	1000Kbps	
ANTENNA INPEDANCE	50 OHMS	
1ST IF	800MHz	
OPERATING TEMPRATURE		
CURRENT CONSUMPTION	80mA MAX	
SIZE	25 x 17.5 x 5 mm	
WEIGHT	ABOUT 5g	

CHARACTERISTICS OF SENDING COMPONENT

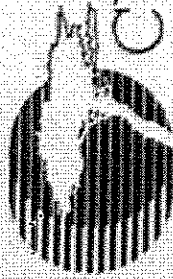
ITEM	RATING	NOTE
TX METHOD	PLL SYNTHESIZER	
TX OUTPUT POWER	1mW +/-0.5mW	
CHIP OF DIFFUSION	32CHIPS	
STABILITY OF FREQUENCY	+/-20ppm	
SPURIOUS STRENGTH	20uW 2.387MHz < f < 2400MHz 2483.5MHz < f < 2496.5MHz 2487MHz > f 2496.5MHz < f	
TRANSMITTER RISE TIME	WITHIN 2mS	

2 MAIN BOARD

ITEM	RATING	NOTE
BATTERY VOLTAGE	6V	
REGULATOR VOLTAGE	3V	
CURRENT CONSUMPTION	100mA MAX.	



Title KI-18 BLOCK DIAGRAM			INSPECTED	DRAWN
Size A4	Number:	Revision:		Akiyama
Date:	08.05.19	Sheet 1 of 1		
File:				
			<b>KO PROPO</b> KONDO KAGAKU CO. LTD	



CYPRESS

PERFORM

CYRF6936

# WirelessUSB™ LP 2.4GHz Radio SoC

## 1.0 Features

- 2.4-GHz Direct Sequence Spread Spectrum (DSSS) radio transceiver
- Operates in the unlicensed worldwide Industrial, Scientific and Medical (ISM) band (2.400 GHz–2.483 GHz)
- 21mA operating current (Transmit @ -5 dBm)
- Transmit power up to +4 dBm
- Receive sensitivity up to -87 dBm
- Sleep Current < 1  $\mu$ A
- Operating range: 10m+
- DSSS data rates up to 250 kbps, GFSK data rate of 1 Mbps
- Low external component count
- Auto Transaction Sequencer (ATS) - no MCU intervention
- Framing, Length, CRC16, and Auto ACK
- Power Management Unit (PMU) for MCU / Sensor
- Fast Startup and Fast Channel Changes
- Separate 16-byte Transmit and Receive FIFOs
- AutoRate™ - dynamic data rate reception
- Receive Signal Strength Indication (RSSI)
- 4-MHz SPI microcontroller interface
- Battery Voltage Monitoring Circuitry
- Serial Peripheral Interface (SPI) control while in sleep mode
- Supports coin-cell operated applications
- Operating voltage from 1.8V to 3.6V
- Operating temperature from 0 to 70°C
- Space saving 40-pin QFN 6x6 mm package

## 2.0 Applications

- Wireless Keyboards and Mice
- Wireless Gamepads
- Remote Controls
- Toys
- VOIP and Wireless Headsets
- White Goods
- Consumer Electronics
- Home Automation
- Automatic Meter Readers
- Personal Health & Entertainment

## 3.0 Applications Support

See [www.cypress.com](http://www.cypress.com) for development tools, reference designs, and application notes

## 4.0 Functional Description

The CYRF6936 WirelessUSB™ LP radio is a second generation member of Cypress's WirelessUSB Radio System-On-Chip (SoC) family. The CYRF6936 is interoperable with the first generation CYWUSB69xx devices. The CYRF6936 IC adds a range of enhanced features, including increased operating voltage range, reduced supply current in all operating modes, higher data rate options, and reduced crystal start-up, synthesizer settling and link turn-around times.

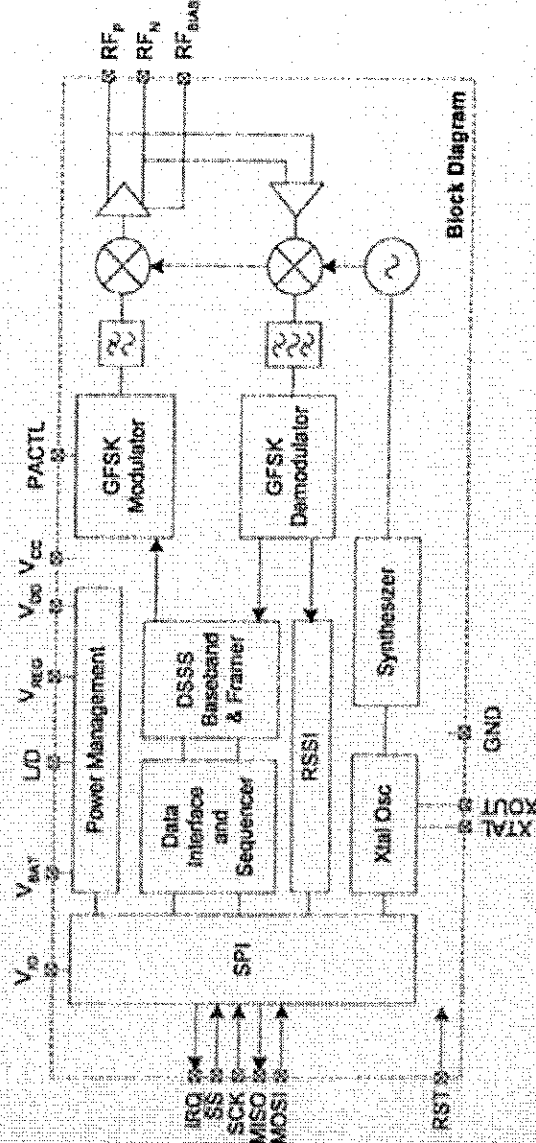


Figure 4-1. CYRF6936 Simplified Block Diagram



Changes or modifications to the transmitter not expressly approved by the Kyosho could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are established to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

\*Herby, KYOSHO CORPORATION, declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The Declaration of Conformity (Doc) can be downloaded at following URL.  
[www.kyosho.com/eng/support/doc/index.html](http://www.kyosho.com/eng/support/doc/index.html)

\*Hiermit erklärt die KYOSHO Corporation, dass dieses Produkt in Übereinstimmung mit der Richtlinie 1995/5/EC ist und ihr in allen relevanten Punkten entspricht. Die Konformitätserklärung kann unter dem folgenden Link abgerufen werden:  
[www.kyosho.com/eng/support/doc/index.html](http://www.kyosho.com/eng/support/doc/index.html)

\*Per la presente, KYOSHO CORPORATION, déclare que cet équipement est conforme aux exigences essentielles et aux autres dispositions de la directive 1995/5/CE qui lui sont applicables. La déclaration de conformité peut être consultée à l'adresse suivante : [www.kyosho.fr/rte-doc.htm](http://www.kyosho.fr/rte-doc.htm)

\*Por medio de la presente KYOSHO declara que este producto cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE

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[www.kyosho.co.jp/](http://www.kyosho.co.jp/)

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