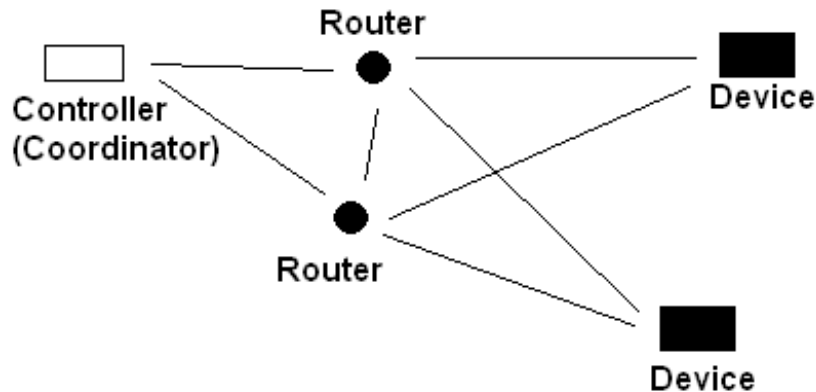


Zigbee Module



Zigbee Network: Support one to multi-point, mesh type



Model number: ZM-□△-◇

ZM: Zigbee module

□: Power level, H (High Power, 100m), L(Low power, 10m)

△: Antenna, C (Chip ant.), S(U.FL/SMA), N(without ant.)

◇: Firmware, C(Coordinator), R(Router), D(Device)

For example: ZM-HC-R means Zigbee module, High power, Chip ant., Router firmware

Features :

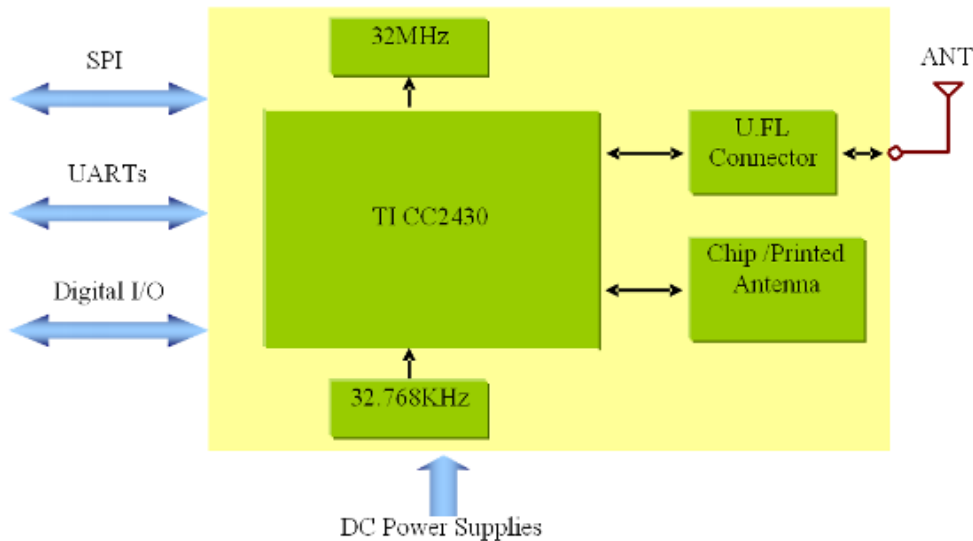
1. Suitable for home/building automation, industrial control and monitoring, low power wireless sensor networks, PC peripherals, set-top boxes and remote controls, consumer Electronic.
2. High performance and low power consumption.
3. Wide supply voltage range (2.0V – 3.6V).
4. Excellent receiver sensitivity and robustness to interferers.
5. RoHS compliant.

Applications :

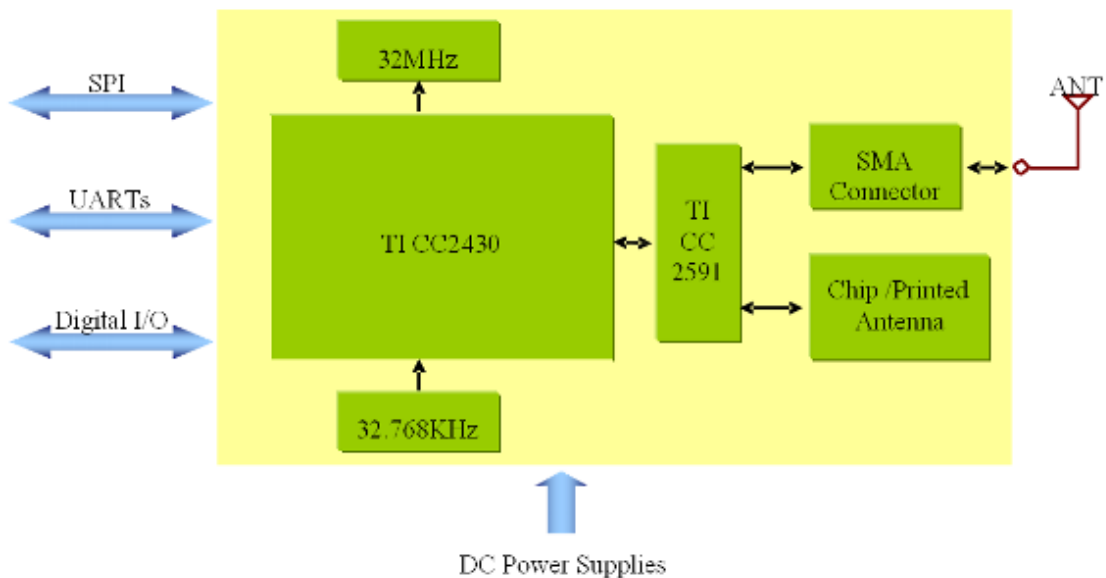
1. Wireless sensor networks, particularly IEEE802.15.4/ ZigBee systems.
2. Home and commercial building automation.
3. ZigBee system.
4. PC peripherals.
5. Industrial control and monitoring system.
6. Set-top boxes and remote controls.
7. Consumer Electronics

Block Diagram:

Low Power:



High Power:



Specifications:

Interface	Description
Frequency	2.4GHz~2.5GHz
Modulation Type	O-QPSK
Transmit power (Low Power)	0dBm
Transmit power (High Power)	16dBm
Receiver sensitivity	-90dBm (Nominal)
Data Rate	250Kbps
Antenna Impedance	50 ohm
Package Size (Low Power)	22*16*3.3 (mm)
Package Size (High Power)	30*16*11 (mm)

Interface:

Interface	Description
Antenna	External Antenna 50Ω
UART Interface	TX, RX, RTS, CTS
SPI Interface	Synchronous Serial Interface
PIO Interface	19 terminals

Environment:

Parameter	Min	Max
Operation Temperature	-20	+75°C
Supply Voltage	-0.3	+3.6 V
Voltage on any Digital Pin	-0.3	VDD+0.3, Max3.6 V
Storage Temperature Range	-40	+125 °C

RF Characters:

Parameter	Min.	Typ.	Max.	Unit
Receiver Sensitivity		-90		dBm
Frequency Error Tolerance	-50		+50	KHz
Output Power (Low Power)	-3	0		dBm
Output Power (High)		+16		dBm
EVM		30		%

Pin-Out Assignment:

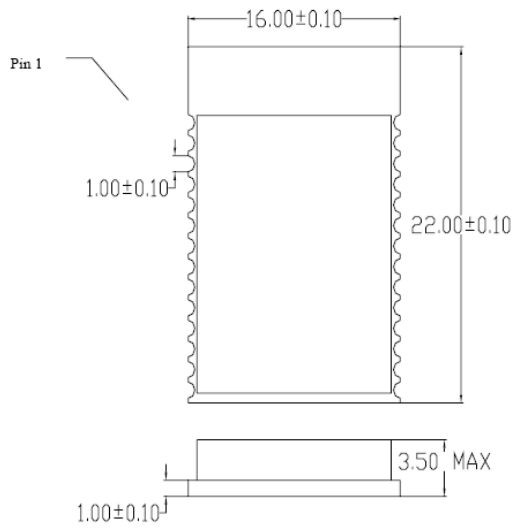
GND	GND	GND	GND
GND	GND	3.3V	VDD
GND	GND	3.3V	VDD
P2_2	P2-2	P0-7	P0_7
P2_1	P2-1	P0-6	P0_6
P2_0	P2-0	P0-5	P0_5
P1_7	P1-7	P0-4	P0_4
P1_6	P1-6	P0-3	P0_3
P1_5	P1-5	P0-2	P0_2
P1_4	P1-4	P0-1	P0_1
P1_3	P1-3	P0-0	P0_0
P1_2	P1-2	RESET	RESET
P1_1	P1-1	GND	GND
P1_0	P1-0	GND	GND

Pin Description:

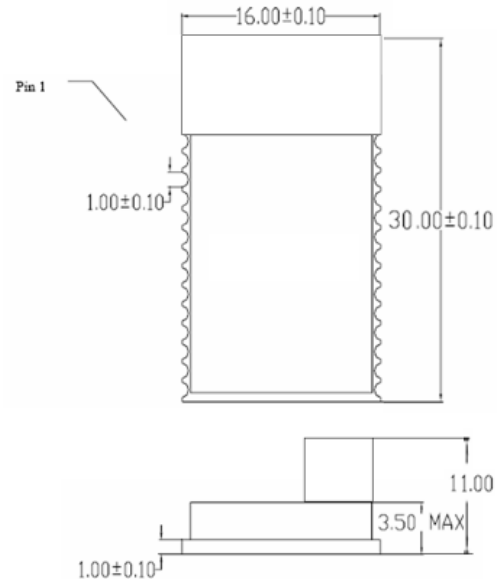
Pin	Name	Pin Type	Description
1	GND	GND	Ground
2	GND	GND	Ground
3	GND	GND	Ground
4	P2_2	Digital I/O	Port 2.2
5	P2_1	Digital I/O	Port 2.1
6	P2_0	Digital I/O	Port 2.0
7	P1_7	Digital I/O	Port 1.7
8	P1_6	Digital I/O	Port 1.6
9	P1_5	Digital I/O	Port 1.5
10	P1_4	Digital I/O	Port 1.4
11	P1_3	Digital I/O	Port 1.3
12	P1_2	Digital I/O	Port 1.2
13	P1_1	Digital I/O	Port 1.1
14	P1_0	Digital I/O	Port 1.0
15	GND	GND	Ground
16	GND	GND	Ground
17	RESET	Digital Input	Reset, Active Low
18	P0_0	Analog / Digital I/O	Port 0.0
19	P0_1	Analog / Digital I/O	Port 0.1
20	P0_2	Analog / Digital I/O	Port 0.2
21	P0_3	Analog / Digital I/O	Port 0.3
22	P0_4	Analog / Digital I/O	Port 0.4
23	P0_5	Analog / Digital I/O	Port 0.5
24	P0_6	Analog / Digital I/O	Port 0.6
25	P0_7	Analog / Digital I/O	Port 0.7
26	3.3V	POWER	2.0V~3.6V Power Supply
27	3.3V	POWER	2.0V~3.6V Power Supply
28	GND	GND	Ground

Dimension:

Low Power:

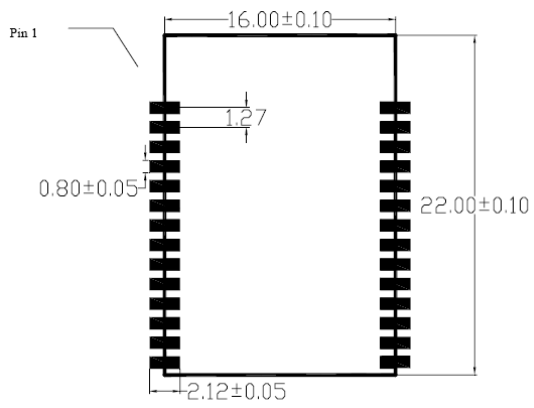


High Power:

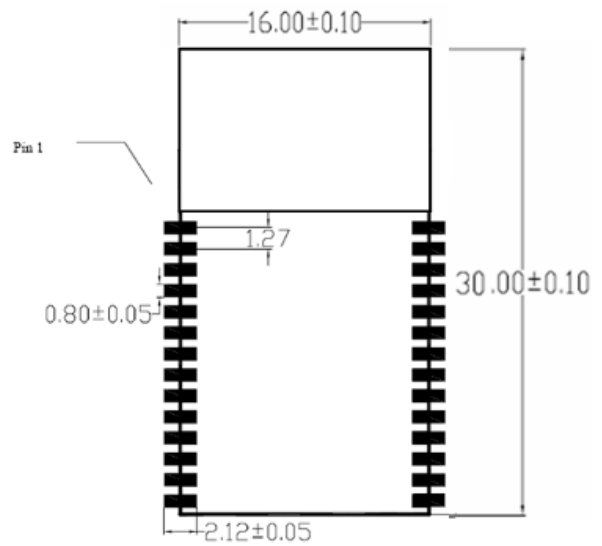


Layout Guide: (mm)

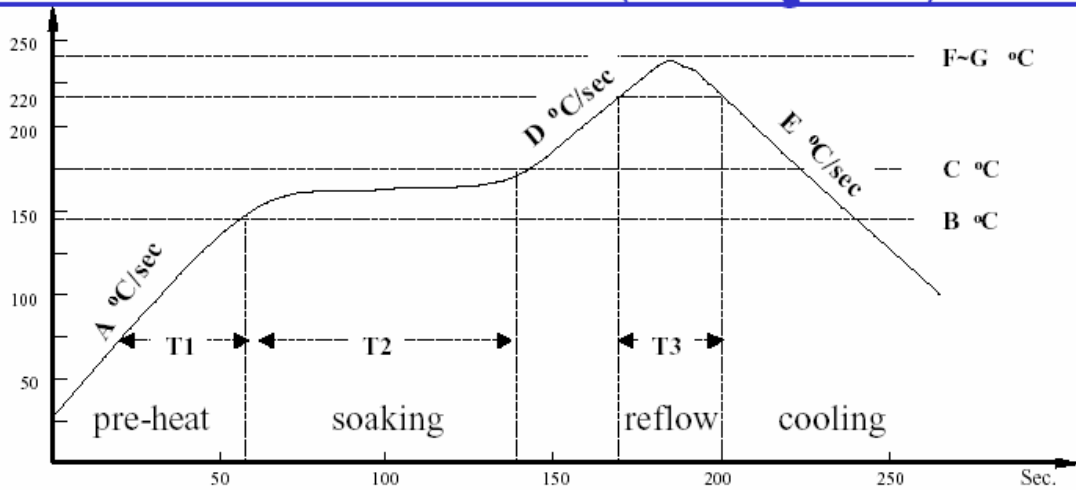
Low Power:



High Power:



Reflow Profile Used at The Evaluation (Sn-3.0Ag-0.5Cu) –PF606-P



A: ramp up rate during preheat:	1.5~3.0 °C/sec
B-C: soaking temperature:	170± 15 °C
D: ramp up rate during reflow:	1.2~2.3 °C/sec
E: ramp down rate during cooling:	1.7~2.2 °C/sec
F-G: peak temperature:	240± 10 °C
T1: preheat time:	65± 15 sec
T2: dwel time during soaking:	75± 15 sec
T3: time above 220 °C :	30± 10 sec

Remark: All contents are subject to change without notice.



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