AN2640SA-B Module Datasheet V1.0 $C\epsilon2200$
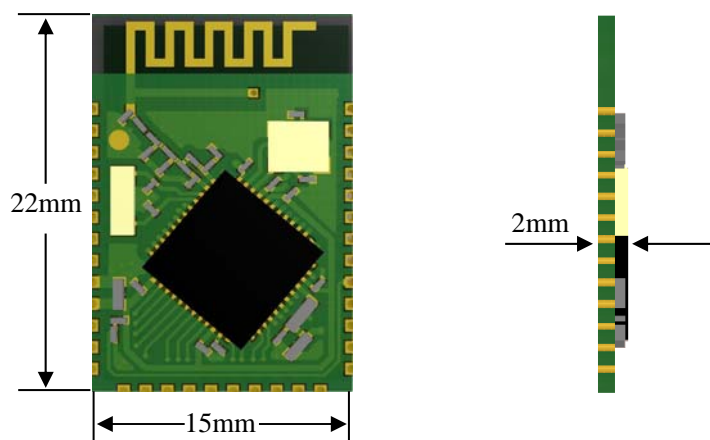
Description

AN2640SA-B Module is designed based on CC2640F128 Bluetooth Smart (BLE4.1) System-on-Chip, fully supports the single mode Bluetooth Low Energy operation. The module provides the ability to either put your entire application into the integrated ARM Cortex M3 microcontroller, or use the module in Network Processor mode in conjunction with the microcontroller of your choice.
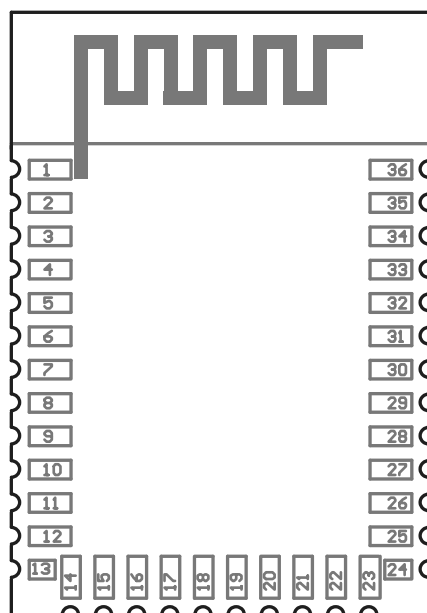
Features

1. Bluetooth4.1, Single mode compliant-Supports master and slave modes
2. Build in CC2640F128 Bluetooth Smart System-On-Chip
3. RF Performance
   - TX Power：+5dBm
   - RX Sensitivity：-87dBm ～ -96dBm
4. Ultra low current consumption
   - Transmit current(0dBm)：6.1mA
   - Receiving current：5.9mA
5. Size: 15 mm×22 mm×2.0mm

Mechanical Drawing

22mm   15mm   2mm

Terminal Description

Pad Number	Name	Description	Pin Type
1	DIO0	GPIO, Sensor Controller	Digital I/O
2	DIO1	GPIO, Sensor Controller	Digital I/O
3	DIO2	GPIO, Sensor Controller	Digital I/O
4	DIO3	GPIO, Sensor Controller	Digital I/O
5	DIO4	GPIO, Sensor Controller	Digital I/O
6	DIO5	GPIO, Sensor Controller, High drive capacity	Digital I/O
7	DIO6	GPIO, Sensor Controller, High drive capacity	Digital I/O
8	DIO7	GPIO, Sensor Controller, High drive capacity	Digital I/O
9	GND	Connect to GND	Ground pin
10	VDD	1.8V to 3.8V main chip supply	Power
11	DIO8	GPIO	Digital I/O
12	DIO9	GPIO	Digital I/O
13	DIO10	GPIO	Digital I/O
14	DIO11	GPIO	Digital I/O
15	DIO12	GPIO	Digital I/O
16	DIO13	GPIO	Digital I/O
17	DIO14	GPIO	Digital I/O
18	DIO15	GPIO	Digital I/O
19	JTAG-TMSC	JTAG TMSC, High drive capability	Digital I/O
20	JTAG-TCKC	JTAG TCKC	Digital I/O

| 21	DIO16	GPIO,High drive capability, JTAG_TDO	Digital I/O
22	DIO17	GPIO, High drive capability, JTAG_TDI	Digital I/O
23	DIO18	GPIO	Digital I/O
24	DIO19	GPIO	Digital I/O
25	DIO20	GPIO	Digital I/O
26	DIO21	GPIO	Digital I/O
27	DIO22	GPIO	Digital I/O
28	RESET_N	Reset, active-low. No internal pullup	Digital input
29	DIO23	GPIO, Sensor Controller, Analog	Digital/Analog I/O
30	DIO24	GPIO, Sensor Controller, Analog	Digital/Analog I/O
31	DIO25	GPIO, Sensor Controller, Analog	Digital/Analog I/O
32	DIO26	GPIO, Sensor Controller, Analog	Digital/Analog I/O
33	DIO27	GPIO, Sensor Controller, Analog	Digital/Analog I/O
34	DIO28	GPIO, Sensor Controller, Analog	Digital/Analog I/O
35	DIO29	GPIO, Sensor Controller, Analog	Digital/Analog I/O
36	DIO30	GPIO, Sensor Controller, Analog	Digital/Analog I/O

Specifications

Parameter			Min	Max	Unit
Operating Voltage			1.8	3.8	V
Operating Temperature			-40	85	℃
Current Consumption	BLE Advertising （Interval 100mS）		0.23	-	mA
	BLE Connection	Interval 30mS	0.35	-	mA
		Interval 50mS	0.22	-	mA
		Interval 100mS	0.12	-	mA
		Interval 500mS	0.02	-	mA
	Sleep mode		-	1	μA
TX Power			-21	+5	dBm
RX Sensitivity			-87	-96	dBm
Storage Temperature			-40	150	℃

Recommended PCB Layout for Package
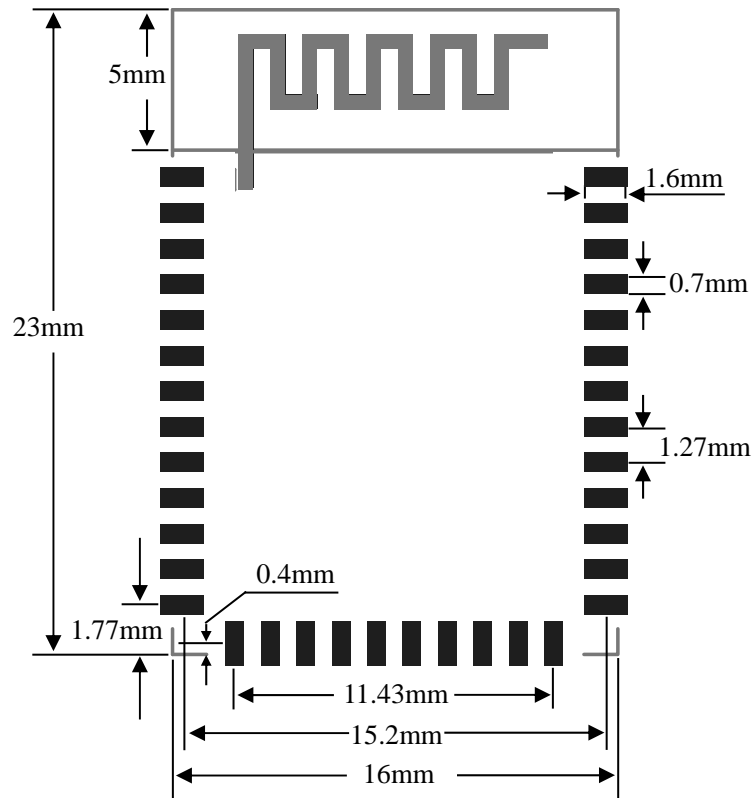
Soldering Recommendations
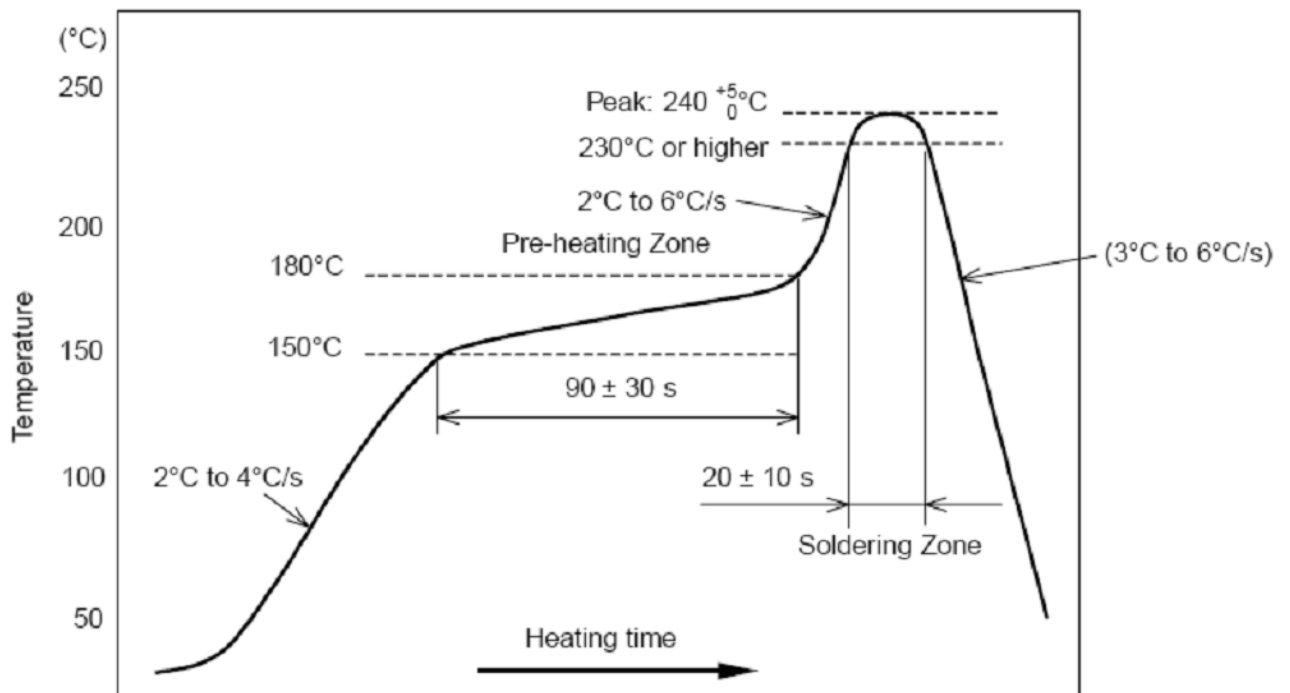
The AN2640SA-B module is designed to comply with the FCC statement. FCC ID is VVJ-AN264 0SA-B. The host system using AN2640SA-B, should have label indicated FCC ID VVJ-AN2640S A-B.

This radio should NOT be installed and operating simultaneously with other radio

FCC STATEMENT

§ 15.21 Information to user.
Any Changes or modifications not expressly approved by the party responsible for compliance co uld void the user's authority to operate the equipment.

§ 15.105 Information to the user.
Note: This equipment has been tested and found to comply with the limits for a Class B digital dev ice, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protecti on 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 inte rference will not occur in a particular installation. If this equipment does cause harmful interferenc e to radio or television reception, which can be determined by turning the equipment off and on, th e user is encouraged to try to correct the interference by one or more of the following measures:
-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is conn ected.
-Consult the dealer or an experienced radio/TV technician for help.

*RF warning for Mobile device:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environ ment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

§ 15.19 Labelling requirements.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.