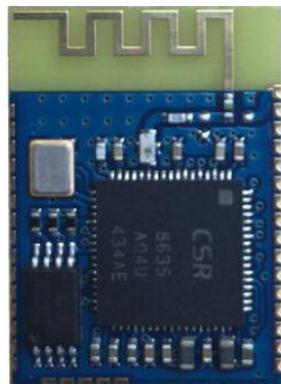
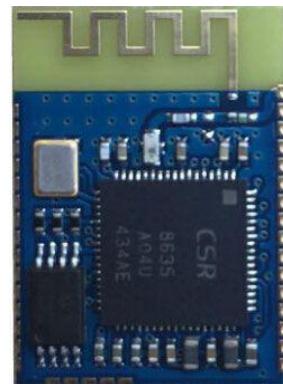


SPK-8635-B Bluetooth Audio Module

Built in Antenna



External Antenna



Technical specification

V1.0

20150310

1. Module description

SPK-8635-B Bluetooth stereo audio modules use British CSR's main chip. High integration, small size, superior sound quality and other characteristics, external components can be achieved only with a few of its powerful features. With A2DP, AVRCP remote control protocol transmission and any Bluetooth audio device: to establish a connection (such as Bluetooth-enabled mobile phones, Bluetooth stereo audio transmitter module, Bluetooth adapters, etc.), receive high-quality wireless stereo audio stream, and enables remote control of the audio player.

The Size and pin definitions of SPK-8635-B can compatible with BC05-B, the user can upgrade the product without any changes , reducing product development time.

SPK-8635-B have two models built-in antenna and external antenna ,user-friendly design.

二. Module features

■ Bluetooth®v4.0 specification compliant

Stereo codec with 1 microphone input

Internal ROM, serial flash memory and EEPROM

interfaces High-performance Stereo codec

Radio includes integrated balun with RF

performance of 8dBm transmit power and -89dBm receiver

sensitivity AVRCP v1.4

Multipoint support for A2DP connection to 2 A2DP sources for music playback

Secure simple pairing, CSR's proximity pairing and CSR's proximity connections

Stereo line-inBluetooth low energy

Bluetooth Radio/speaker Bluetooth Transmitter

Bluetooth Receiver Bluetooth v4.0 specification support

A2DP v1.2 AVRCP v1.4

HFP v1.6

HSP v1.2

DI v1.3

3: Application field.

Stereo speakers

Speakerphones

1-mic stereo headset or headphones

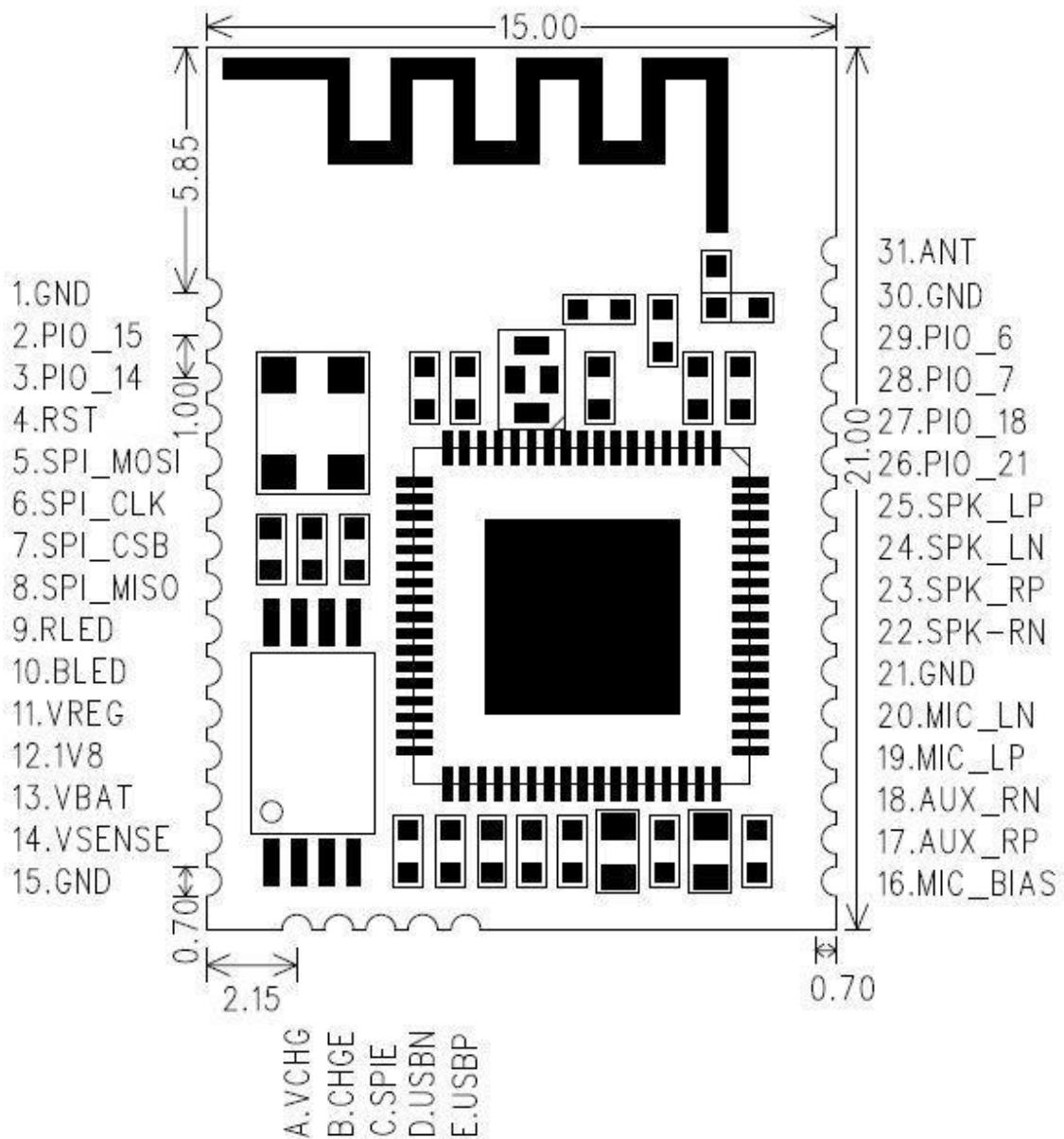
Handsfree car kits

The enhanced Kalimba DSP coprocessor with 80MIPS

supports enhanced audio and DSP applications.

The integrated audio codec supports stereo input and output,
as well as a variety of audio standards.

4. Module pin definition and size

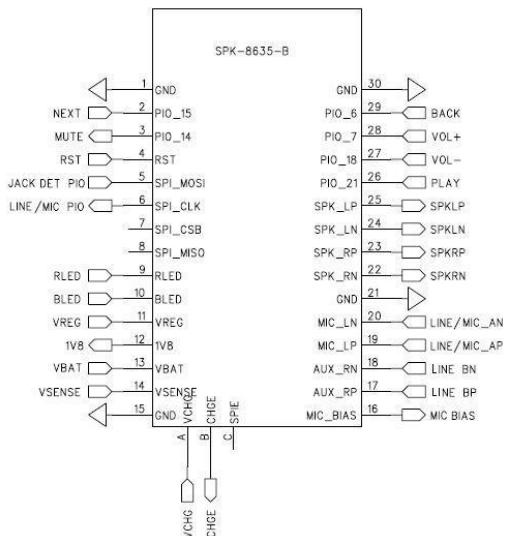


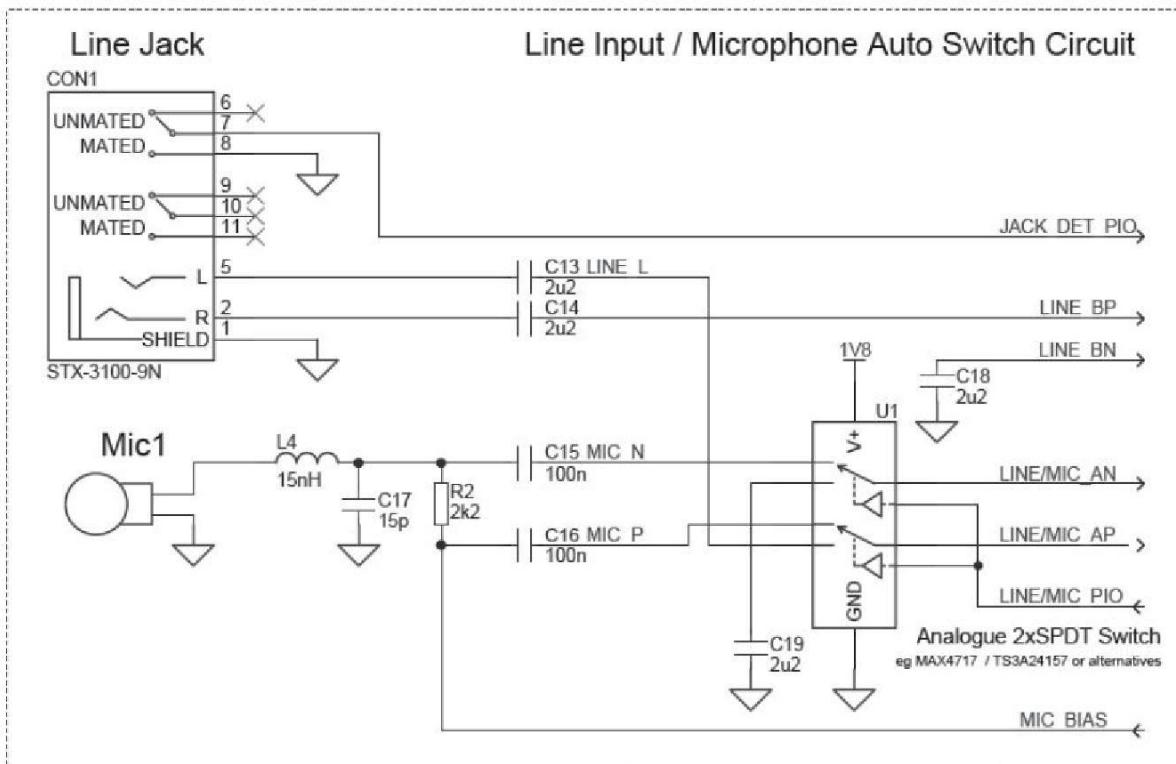
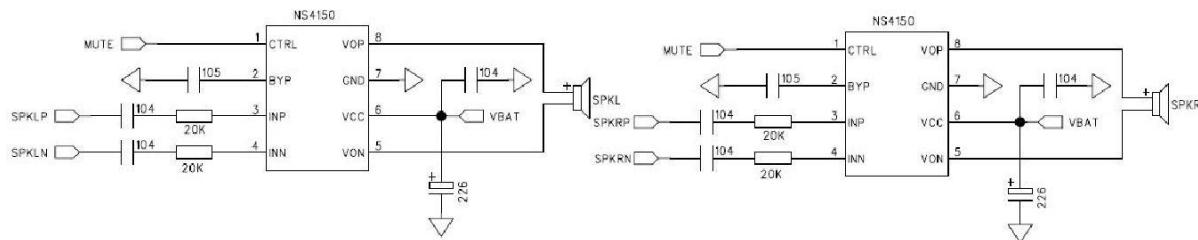
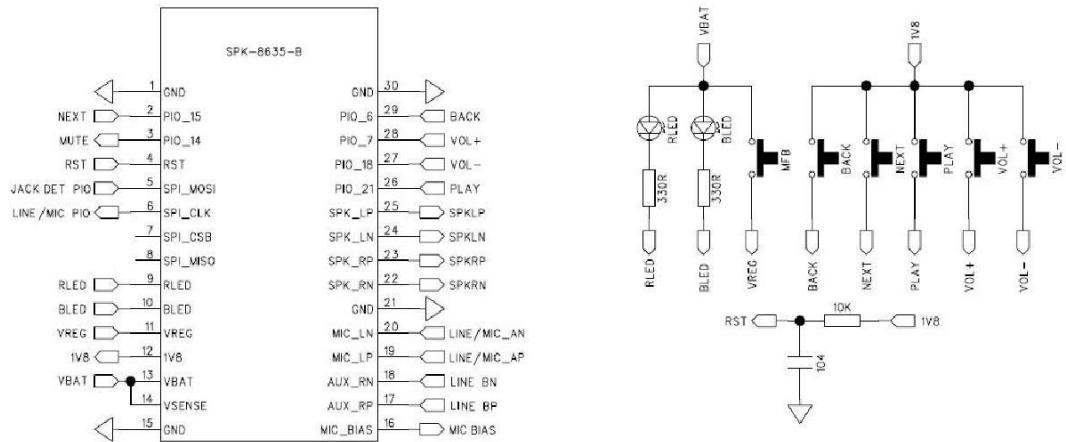
5. Module pin definition specification.

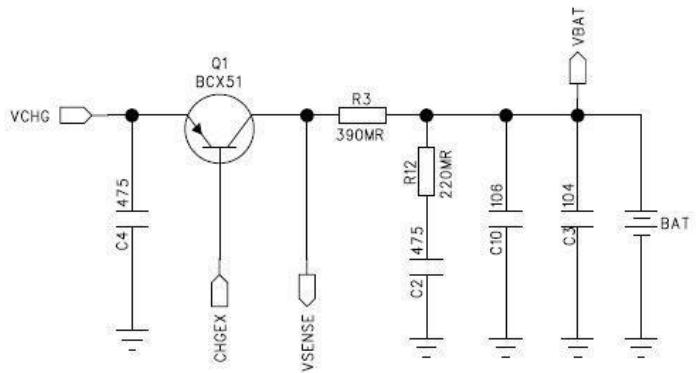
Pin No	Pin Definition	input/output	引脚功能描述
1	GND	input/output	Earthing
2	PIO_15	input/output	Next song control / PIO_15 / UART_TX
3	PIO_14	input/output	External amplifier mute control MUTE / PIO_14 / UART_RX
4	RST	input	External (low)
5	SPI_MOSI	input/output	SPI_MOSI / PIO_2 / PCM1_IN
6	SPI_CLK	input/output	SPI_CLK / PIO_5 / PCM1_CLK
7	SPI_CSB	input/output	SPI_CSB / PIO_4 / PCM1_SYNC

8	SPI_MISO	input/output	SPI_MISO / PIO_3 / PCM1_OUT
9	RLED	output	LED1(red lights)
10	BLED	output	LED2(blue lights)
11	VREG	input	On/off/pair/answer phone control button
12	1V8	output	1.8V power output
13	VBAT	input	power(Li-on Battery) power supply (3.3V---4.2V)
14	VSENSE	input	Lithium battery detection port
15	GND	input/output	Earthing
16	MIC_BIAS	output	Microphone power
17	AUX_RP	input	LINE input Right channel positive terminal
18	AUX_RN	input	LINE input Right channel negative terminal
19	MIC_LP	input	Microphone input positive terminal / AUX_LP
20	MIC_LN	input	Microphone input negative terminal / AUX_LN
21	GND	input/output	Earthing
22	SPK_RN	output	differential output of Stereo Right channel , negative terminal
23	SPK_RP	output	differential output of Stereo Right channel ,positive terminal
24	SPK_LN	output	differential output of Stereo left channel , negative terminal
25	SPK_LP	output	differential output of Stereo left channel , positive terminal
26	PIO_21	input/output	Play/pause button control / PIO_21
27	PIO_18	input/output	Volume - / PIO_18
28	PIO_7	input/output	Volume + / PIO_7
29	PIO_6	input/output	Previous / PIO_6
30	GND	input/output	Earthing
31	ANT	inputoutput	External antenna port
A	VCHG	input	Power charging port (5V)
B	CHGE	output	Charge control enable port
C	SPIE	input	Function setup port: 1=SPI, 0=PIO
D	USBN	input/output	USB communication negative terminal
E	USBP	input/output	USB communication negative terminal

6. Typical Application Circuit







七. LAYOUT Notes

Pay attention on place modules: antenna below (including the back of PCB)and around can not have any traces ,devices, antennas should be placed in the open place to ensure optimal performance of the antenna. Recommended that the antenna PCB milling empty or the antenna protruding edge of the plate.

2. To ensure the integrity of the ground, we recommend a large area paved, multi-punched. because Bluetooth work in the high-frequency band, poor grounding will bring current sound. All the ground network ,please consider the ground of main power as a reference point.

8. Latest Version 20150310