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HTC-SPK03

Bluetooth 2.1+EDR Wireless Speaker Module

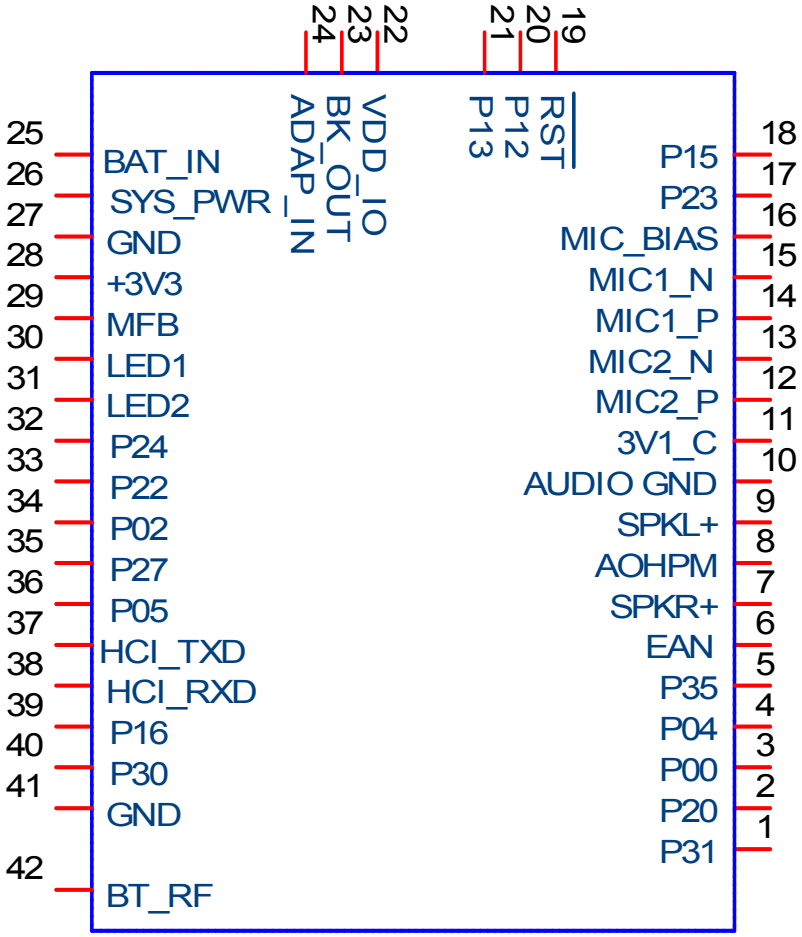
Product Description

The HTC-SPK03 is a highly integrated Bluetooth 2.0/2.1+EDR stereo module, designed for high data rate, short-range wireless communication in the 2.4 GHz ISM band. With Bluetooth stack and profile, the HTC-SPK03 provides a low power and ultra-low cost Bluetooth 2.1+EDR solution for wireless voice/audio applications.

Features

- Bluetooth 2.1+EDR compliant
- Typical +2dBm Class 2 output power
- Receiver Sensitivity: GFSK typical -90dBm, π/4 PSK typical -90dBm, 8DPSK typical -83dBm
- Piconet and Scatter net support
- HCI UART interface
- CVSD, A-law, μ-law CODEC algorithms for voice applications
- SBC decode for Bluetooth stereo streaming
- Build-in High performance stereo codec
- Cap-less headphone driver
- Audio DAC: 93dB SNR
- HSP, HFP, A2DP, AVRCP profile support
- 3.3V operating voltage
- ROM version: 32Kb EEPROM / Flash version: Build in 4Mb Flash
- Size: 17mm x 23.3mm
- External Antenna
- RoHS compliant

Device Pinout Diagram

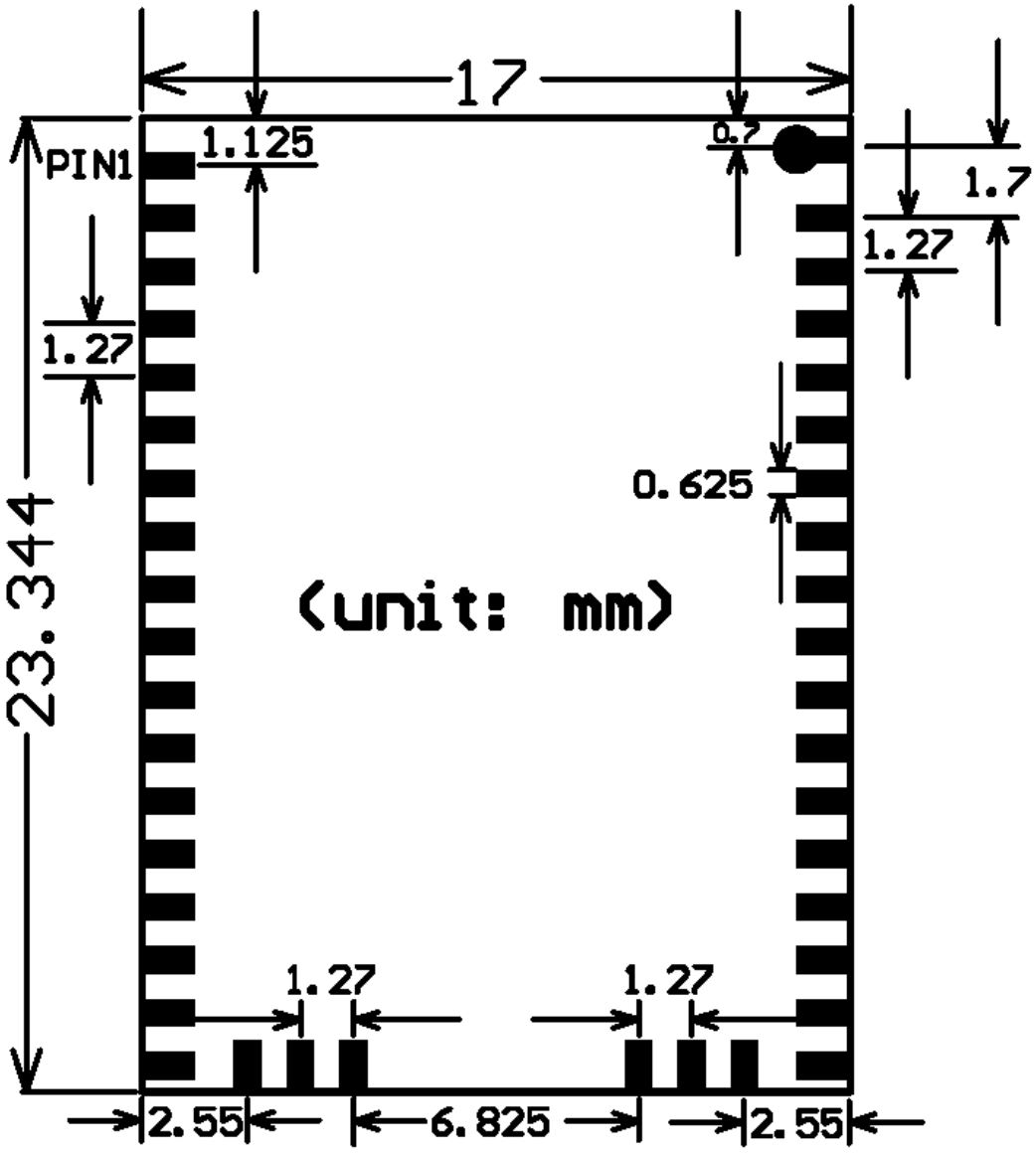


Pin Definition

Pin No.	Pin Name	Description
1	P31	Programmable I/O line
2	P20	Programmable I/O line
3	P00	Programmable I/O line
4	P04	Programmable I/O line
5	P35	Programmable I/O line
6	EAN	Embedded ROM/External Flash enable H: Embedded; L: External Flash
7	SPKR+	Speaker output right channel +
8	AOHPM	Virtual ground for SPKR+ and SPKL+
9	SPKL+	Speaker output left channel +
10	AUDIO GND	Audio ground
11	3V1_C	Internal LDO 3.1V output voltage for Audio
12	MIC2_P	MIC 2 input +
13	MIC2_N	MIC 2 input -
14	MIC1_P	MIC 1 input +
15	MIC1_N	MIC 1 input -
16	MIC_BIAS	MIC bias voltage output
17	P23	Programmable I/O line
18	P15	Programmable I/O line
19	RST	Reset
20	P12	Programmable I/O line
21	P13	Programmable I/O line

Pin No.	Pin Name	Description
22	VDD_IO	3V1 IO input
23	BK_OUT	Internal voltage
24	ADAP_IN	5V Adapter input
25	BAT_IN	Li – Battery Input
26	SYS_PWR	System Power Output Voltage
27	GND	GROUND
28	+3V3	3V3 Input Voltage
29	MFB	Multi Function Key
30	LED1	LED output
31	LED2	LED output
32	P24	Programmable I/O line
33	P22	Programmable I/O line
34	P02	Programmable I/O line
35	P27	Programmable I/O line
36	P05	Programmable I/O line
37	HCI_TXD	UART data output
38	HCI_RXD	UART data input
39	P16	Programmable I/O line
40	P30	Programmable I/O line
41	GND	Ground
42	BT_RF	RF port

Outline Dimension



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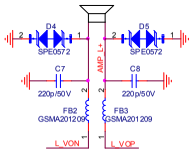
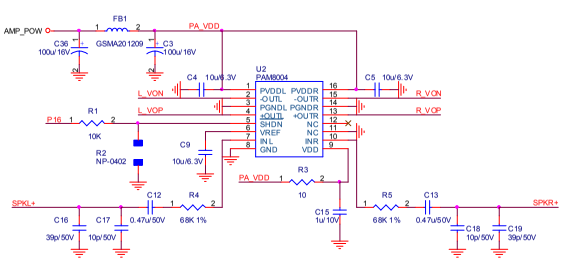
SPEAKER OUTPUT PATH

L Channel

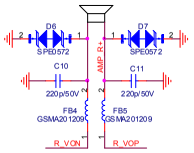


STEREO AMP CIRCUIT

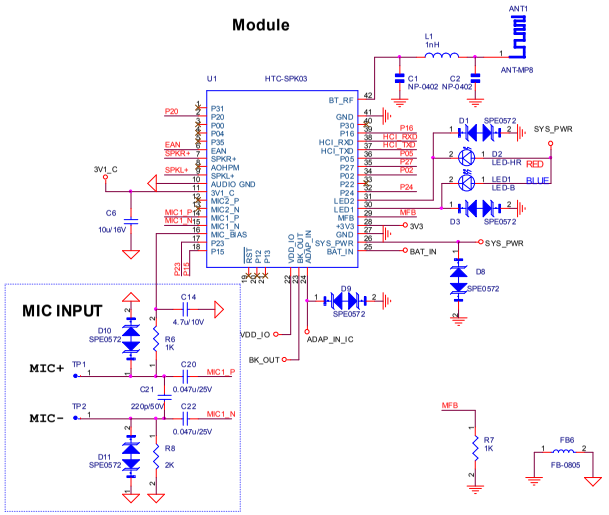


SPEAKER OUTPUT PATH

R Channel



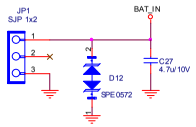
Module



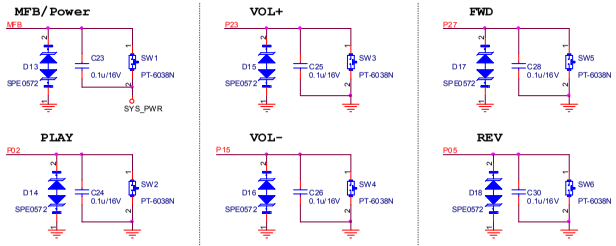
MIC INPUT

MAIN POWER TREE

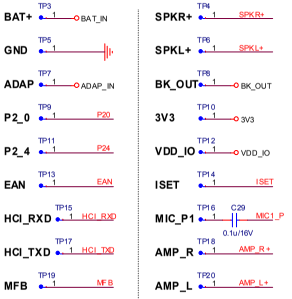
Li Battery



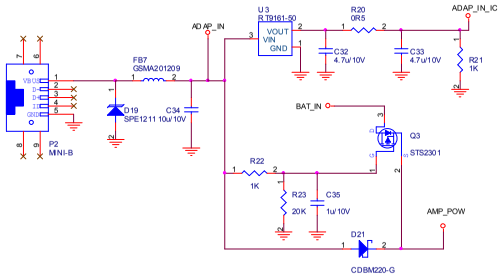
PUSH BUTTON



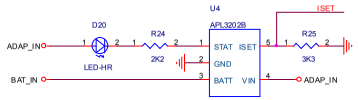
TEST POINT



5V Adapter In



EXTERNAL CHARGER



*Charge Current Formula:
Ichg=Kset x Vset /Rset
Kset=1000, Vset=1V,
Rset=3.3K=> Ichg=300mA

GPIO vs. APPLICATIO FUNCTION

GPIO	APPLICATION	GPIO	APPLICATION
P00	Ext. Power ON button	P22	Ext. Power ON enable
P04	Audio Amp. Enable	P02	Play/Pause
P35	Buzzer Driver (*Optional)	P27	Forward
P23	Volume +	P05	Reverse
P15	Volume -	P16	Audio Amp. Enable
P12	EEPROM_CLK	P30	FM Input detect
P13	EEPROM_DATA		

P/N

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