

Bluetooth Audio Module Transmitter



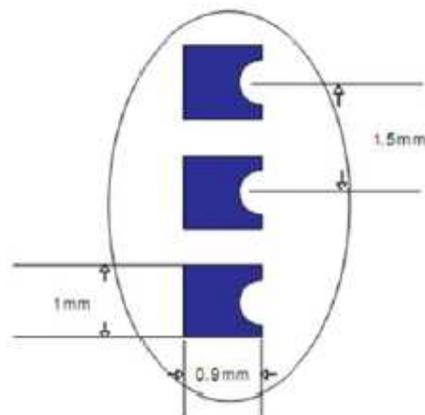
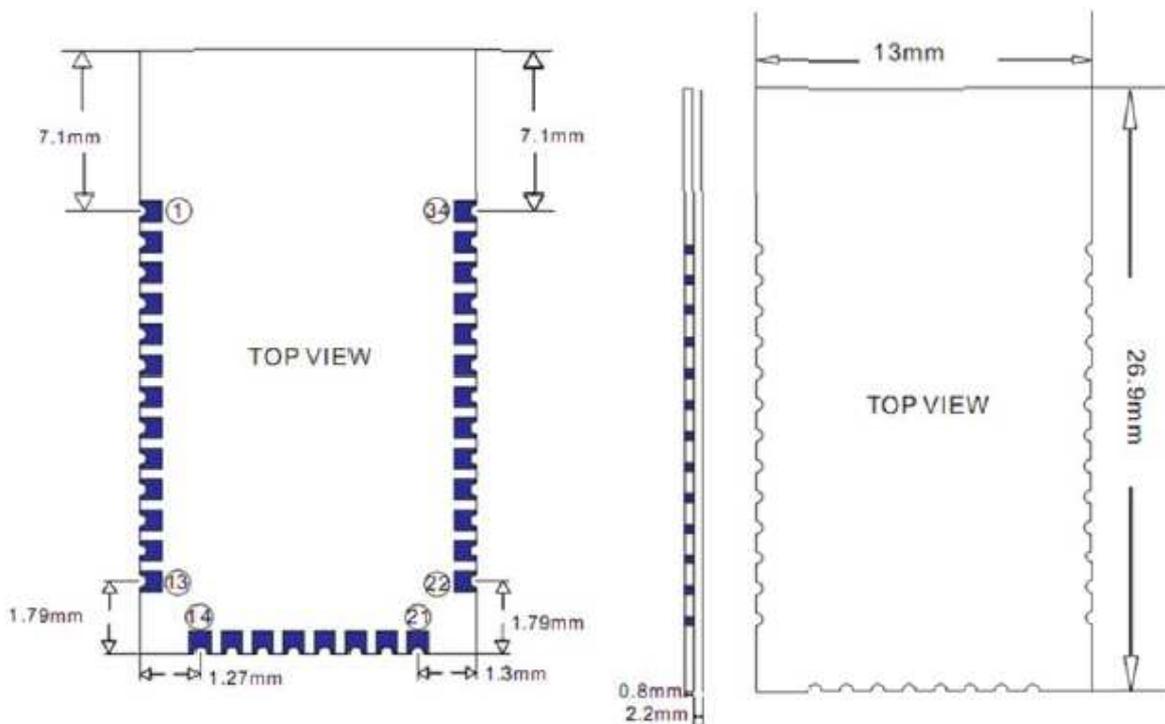
Product features

- ◆ Audio Interface: 3.5mm/0.14in
- ◆ Bluetooth specification v2.1 + EDR
- ◆ High-board antennas
- ◆ Dimensions: 18mm x 42mm
- ◆ Dual 35-40mW Amplifier
- ◆ +12dB to -33dB and Class II
- ◆ without password to connect
- ◆ Volume up and down
- ◆ Used for embedded wireless serial transmission alternatives

The device name will be show " **Bluetooth_SPK**"

Product Specifications

Bluetooth protocol	◆ Bluetooth Specification v2.1+EDR
USB protocol	◆ USB v1.1/2.0
Frequency	◆ 2.4GHz ISM band
Modulation	◆ GFSK(Gaussian Frequency Shift Keying)
Transmit power	◆ $\leq 4\text{dBm}$, Class 2
Sensitivity	◆ $\leq -84\text{dBm}$ at 0.1% BER
Rate	◆ Asynchronous: 2.1Mbps(Max) / 160 kbps Synchronous: 1Mbps/1Mbps
Power Supply	◆ +3.7VDC 50mA
Working temperature	◆ $-5 \sim +45$ Centigrade



Stereo Codec: Digital to Analogue Converter

Digital to Analogue Converter						
Parameter	Conditions		Min	Typ	Max	Unit
Resolution	-		-	-	16	Bits
Output Sample Rate, F_{sample}	-		8	-	48	kHz
Signal to Noise Ratio, SNR	$f_{in} = 1\text{kHz}$ B/W = 20Hz~20kHz A-Weighted THD+N < 0.01% 0dBFS signal Load = 100k Ω	F_{sample}				
		8kHz	-	95	-	dB
		11.025kHz	-	95	-	dB
		16kHz	-	95	-	dB
		22.050kHz	-	95	-	dB
		32kHz	-	95	-	dB
		44.1kHz	-	95	-	dB
		48kHz	-	95	-	dB
Digital Gain	Digital Gain Resolution = 1/32dB		-24	-	21.5	dB
Analogue Gain	Analogue Gain Resolution = 3dB		0	-	-21	dB
Output voltage full-scale swing (differential) ^(a)			-	750	-	mV rms
Allowed Load		Resistive	-	16	p.c.	Ω
		Capacitive	-	-	500	pF
THD+N 100k Ω load			-	-	0.01	%
THD+N 16 Ω load			-	-	0.1	%
SNR (Load = 16 Ω , 0dBFS input relative to digital silence)			-	95	-	dB

^(a) Any combination of gain (digital and / or analogue) and input signal which results in the output signal level exceeding the minimum or maximum signal level (analogue or digital) could result in distortion.

PIN	PURPOSE	ACTION
#1 SPK L(-) , #2 SPK L(+)	To speaker or AMP	
#1 SPK R(-) , #2 SPK R(+)	To speaker or AMP	
#9 PIO11	Volume up	HOLD 2 Sec
#9 PIO11	Volume down	press
#15 SHTDWN	SHUT DOWN ON/OFF	TO Amplifier
#20 RESET	NO USE	AUTO RESET
#25 (VREN)	ON/OFF	HOLD 2-3 Sec
#25 (VREN)	Auto Detect / Paired	HOLD 5-6 Sec
#27 VBAT	DC POWER	3.3-4.5V
#28 V_CHG	BATTERY CHARGER IN	3.3-4.2V

