

Multi-frequency FM transmitter module

DESCRIPTION

The TS613A is a low-cost high-quality FM transmitter module containing complex FM stereo modulation circuit and FM transmit circuit. With the features of ultra small module size, excellent performance and easy to control, it's widely used for portable digital products or car multimedia products.

FEATURES

- Excellent stereo sound quality
- High signal-to-noise ratio, low distortion, Frequency deviation<1.2KHz
- Ultra small module size, 11 mm x 11 mm
- Fourteen FM Tx frequency points can be set easily
- FM frequency brand can be selected (US/JPN)
- Audio response range 100Hz – 12KHz
- Operating Voltage 2.2 - 4.4V

APPLICATIONS

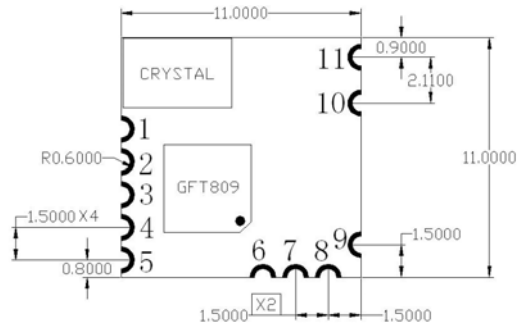
- MP3 / MP4 / PMP Players
- Car MP3、Car DVD、car GPS
- FM transmitters
- Mobile Phone
- Wireless Headphones

ELECTRICAL CHARACTERISTICS

Parameters	Symbol	Min	Typ	Max	Units	Test condition
Power supply Voltage	Vcc	2.2	3.0	4.4	V	
Operating Current	Icc	8	9	10	mA	Vcc=3.0V
Transmitting Power	Prf	100	102uv	104	dBuV	FTX=89.2MHz & 107.9MHz
Transmitting Frequency	Ftx		87.7~88.9/106.7~107.97 6.8~78.0/88.0~89.2		MHz	VCC=2.2-4.4V
Audio response	Frs	100	-	12K	Hz	VCC=2.2-4.4V
Audio input level	Lin-A	-	-	-10	dB	-
Total Harmonic Distortion	THD	-	0.1	0.3	%	Vin=-20dBV
Input Output Gain	GN	-1	0	1	dB	Vin=-20dBV, L+R
Channel	SEP	30	40	-	dB	Vin=-20dBV

separation						
Operating Temperature	Topr	-30	25	85	°C	-
ESD	Vesd	-	2000	-	V	-

Size and Pin Description



Pin No.	Symbol	Description
1	Band	Frequency band selection
2	D0	Data 0
3	D1	Data 1
4	D2	Data 2
5	D3	Data 3
6	R_IN	Audio input, Reft channel
7	L_IN	Audio input, Light channel
8	GND	POWER Ground
9	VCC	VCC
10	RF_OUT	RF signal out
11	GND	POWER Ground

Carrier Frequency Selection

Data				Frequency(MHz)	
D0	D1	D2	D3	Pin#1 to VCC **	Pin#1 to GND **
0	0	0	0	87.7	76.8
1	0	0	0	87.9	77.0
0	1	0	0	88.1	77.2
1	1	0	0	88.3	77.4
0	0	1	0	88.5	77.6
1	0	1	0	88.7	77.8

0	1	1	0	88.9	78.0
1	1	1	0	PLL Off	
0	0	0	1	106.7	88.0
1	0	0	1	106.9	88.2
0	1	0	1	107.1	88.4
1	1	0	1	107.3	88.6
0	0	1	1	107.5	88.8
1	0	1	1	107.7	89.0
0	1	1	1	107.9	89.2
1	1	1	1	PLL Off	

****NOTE:**

Frequency band of the United States or Japan can be selected by the connection of Pin #1 to Vcc or ground.

Part Number Information
TS613A
