# Wireless Audio Link IC

# **BH1417F**

The BH1417F is a FM stereo transmitter IC that transmits simple configuration. The IC consists of a stereo modulator for generating stereo composite signals and a FM transmitter for broadcasting a FM signal on the air. The stereo modulator generates a composite signal which consists of the MAIN, SUB, and pilot signal from a 38kHz oscillator.

The FM transmitter radiates FM wave on the air by modulating the carrier signal with a composite signal. Frequency is set for North America.

#### Applications

Wireless speakers, Personal computer(sound board), Game machine, CD changer, Car TV, Car navigation

#### Features

- 1) It is possible to improve the timbre because it has the pre-emphasis circuit, limiter circuit, and the low-pass filter circuit.
- 2) Built-in pilot-tone system FM stereo modulator circuit.
- 3) The transmission frequency is stable because it has a PLL system FM transmitter circuit.
- 4) PLL controls data input in parallel (4bits, 14ch for North America).

#### ● **Absolute maximum ratings** (Ta = 25°C, In measurement circuit.)

Parameter	Symbol	Limits Un		Conditions		
Supply voltage	Vcc	+7.0	V	Pin8,12		
Date input voltage	VIN-D	-0.3 to Vcc+0.3	V	Pin15,16,17,18		
Phase comparator output voltage	Vout-p	-0.3 to Vcc+0.3	V	Pin7		
Power dissipation	Pd	450 <sup>*</sup>	mW			
Storage temperature	Tstg	-55 to +125	°C			

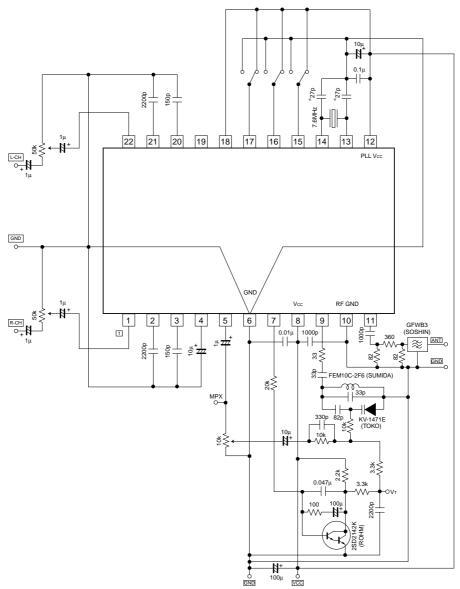
<sup>\*</sup> Derating : 4.5mW/°C for operation above Ta=25°C.

#### ● Recommended operating conditions (Ta = 25°C)

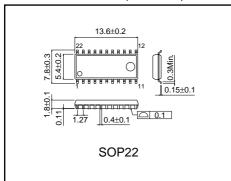
Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Operating supply voltage	Vcc	4.0	_	6.0	V	Pin8,12
Operating temperature	Topr	-40	_	+85	°C	
Audio input level	VIN-A	_	_	-10	dBV	Pin1,22
Audio input frequency band	fin-a	20	_	15k	Hz	Pin1,22
Pre-emphasis time constant set up range	τ PRE	_	_	155	μs	Pin2,21
Transmission frequency(200kHz step)	fтх	87.7 106.7	_	88.9 107.9	MHz	Pin9,11
Control terminal "H" level input voltage	ViH	0.8Vcc	_	Vcc	V	Pin15,16,17,18
Control terminal "L" level input voltage	VIL	GND	_	0.2Vcc	V	Pin15,16,17,18

## Application circuit

US BAND (88.0MHz~89.2MHz)



## ●External dimensions (Units : mm)



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