

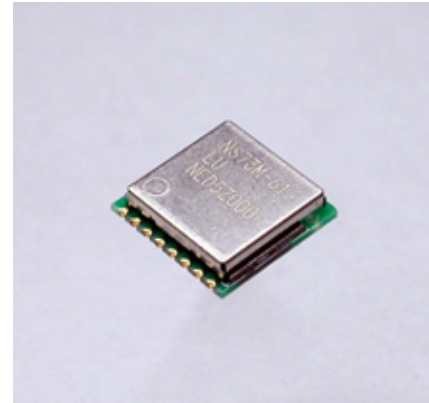
# 7 × 7mm Small Size FM Transmitter Module NS73M-61LU

## General Description

NS73M is a FM stereo transmitter module for the applications such as wireless Microphone, MP3, CD, cellular phone.

## Features

- Transmission frequency Coverage:
  - 87.5MHz to 108MHz
- Stereo multiplexing modulation
- 32.768kHz crystal oscillation support
- Small size package --- 7 x 7 x 1.5mm (typ.)
- Package type : DFN(Dual Flat No Lead Package)
- Package weight : 132mg (typ.)
- Two external components required (a capacitor and a crystal)
- Alignment-free
- 3-wire and I<sup>2</sup>C support for MPU interface
- Operating Voltage = 2.7V to 3.6V (3.0V typ.)
- Operating Temperature = -20degC to +75degC
- Full CMOS process



## Operating Conditions

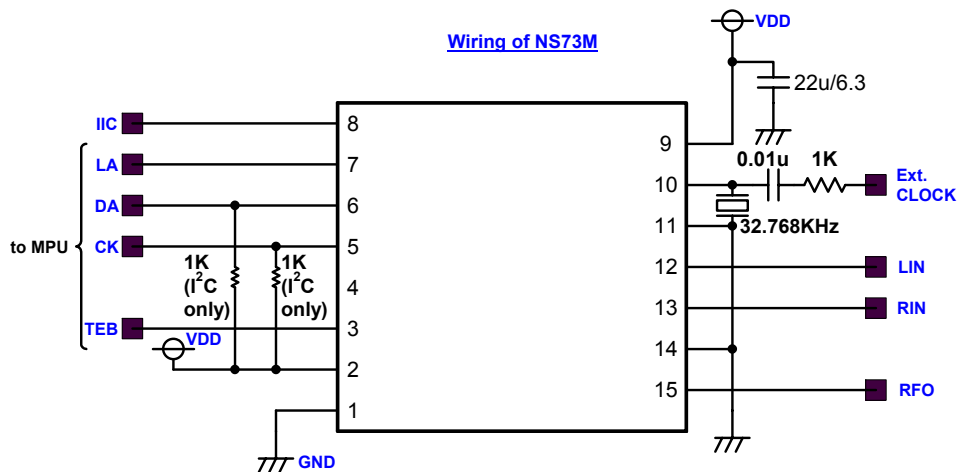
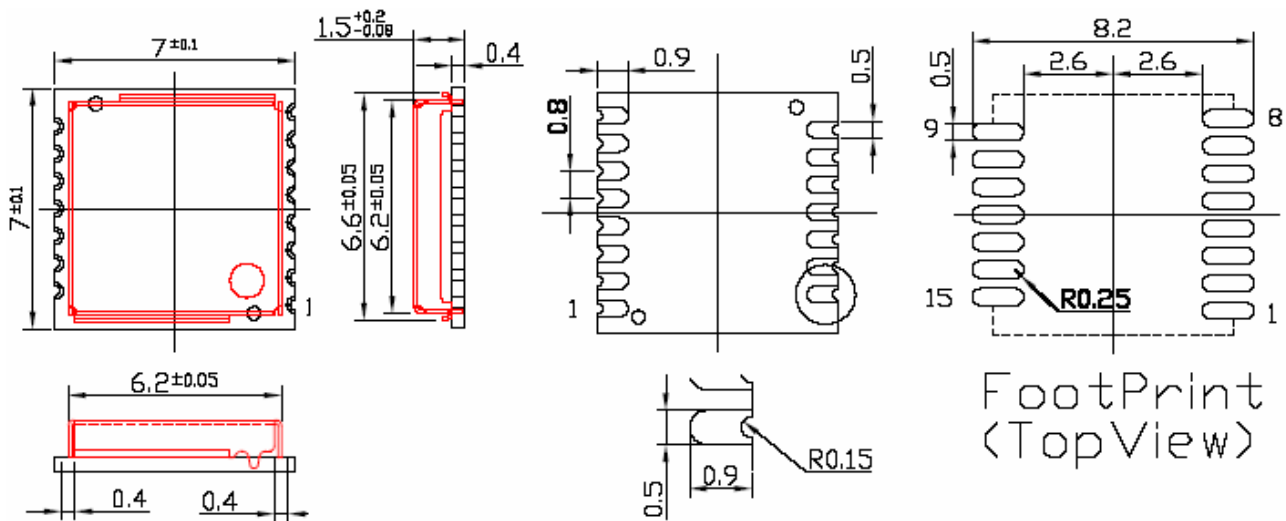
ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT
Operating Voltage	VDD	2.7	3.0	3.6	V
Operating Temperature	Ta	-20		+75	degC
Storage Temperature	Tstg	-30		+80	degC

## Electrical Performance

VDD = 3.0V+/-0.05V, Ta = 25degC, f-AF = 1kHz, Vi-AF = 90mVrms, otherwise specified

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
Current Consumption	I <sub>dd</sub>			36	45	mA
Standby Current	I <sub>stb</sub>			1.5	20	uA
Input Low level Voltage	ViL	IIC, LA, DA, CK pins	-0.3	0	0.25 * VDD	V
Input High Level Voltage	ViH	IIC, LA, DA, CK pins	0.75 * VDD	VDD	VDD + 0.3	V
Output Low Level Voltage	VoL	DA pin IoL = -3mA	0		0.4	V
TX Frequency	f <sub>TX</sub>		87.5		108	MHz
TX Power Output	PO	RI = 50-ohm, fo = 90MHz	0.25		2	mW
Modulation Deviation	Dev	Pre-emphasis = on	+/-50			kHz
Modulation Distortion(MONO)	THD			0.4	1.0	%
Modulation SN Ratio	SNR		50	55		dB
Stereo Separation	SEP		25	35		dB
Audio Freq. Response	FR	f = 50Hz - 15kHz fi = 400Hz@0dB Vi = 12mVrms	-3	0	1.5	dB
Audio input impedance	Z <sub>af</sub>	f=50Hz - 15kHz	50	60		kohm
Pilot Tone Level	PL		9	10	11	%
Crystal Frequency	f <sub>XT</sub>		32.768			kHz
Crystal Tolerance	d <sub>XT</sub>	Ta = 25degC VDD = 2.7V - 3.6V	-20	0	20	ppm

## Outer Dimension



## Terminals for connection

Pin No.	Pin Name	Description
1	GND	GND
2	VDRF	VDD
3	TEB	Unlock Detect Output
4	PWE	Non Connection
5	CK	Clock for I/O input(Pull up R needed)
6	DA	Data I/O for I/F(Pull up R needed)
7	LA	Latch for 3-wire or Address for I <sup>2</sup> C
8	IIC	I <sup>2</sup> C or 3-wire I/F selector
9	VCC	VDD
10	X1	Crystal Oscillator input
11	GND	GND
12	LIN	Audio Left signal input
13	RIN	Audio Right signal input
14	GND	GND
15	RFO	RF Power output

Note: For further information, please contact our sales department.



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