

KK8031-XX

FEATURES

- 127-note ROM memory
- 2.0V to 5.0V power supply and low power consumption
- RC oscillator on chip
- One shot or level hold mode (mask option)
- Sound range: 2.5 octaves, 2 series
- Tempo: 16 kinds (presto-largo)
- Double sound sources
- Digital Envelope Effect

FUNCTIONS

- Dynamic speaker can be driven with external NPN transistor
- Power on reset; melody begins from the first note
- Start from the head of melody
- Bare chip or TO-92 are available

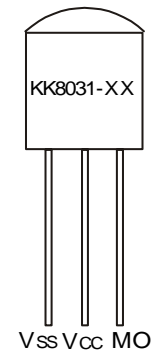
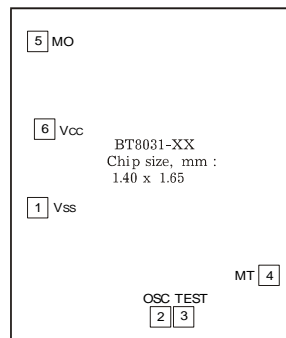
DESCRIPTION

The KK8031-XX is a CMOS LSI chip, which plays a prearranged melodies. The ROM has a 127 words and can store up to two melodies with double sound sources, and it uses the built-in digital envelope circuit.

SONG LIST

01	For Elise
02	Ding - Dong
03	Westminster
04	One Ding - Dong
05	It's Small World

PIN CONFIGURATION



CHIP

TO-92

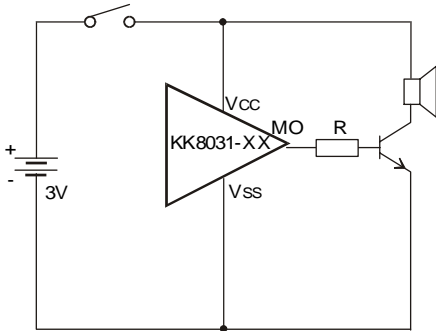
ELECTRICAL CHARACTERISTICS (V_{CC} = 3V, V_{SS} = 0V, T_a = 25°C; unless otherwise specified)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Operating Voltage	V _{CC}		2.0	3.0	5.0	V
Supply Current	I _S	Stand-by*		-	5	A
		Operating		0.6	1	
Output Drive Current	I _{OH}	V _{CC} = 3V, V _O = 0.8V	0.5	0.5		mA
Output Sink Current	I _{OL}	V _{CC} = 3V, V _O = 0.5V	0.5	0.5		mA
Input Current MT	I _I	V _{IN} = V _{CC}	0.5		3.0	A
Frequency Stability	ΔF/F	F _{osc} (3V) - F _{osc} (2V)		-	15	%
		F _{osc} (3V)				

* Only for version "ONE SHOT MODE"

APPLICATION CIRCUITS

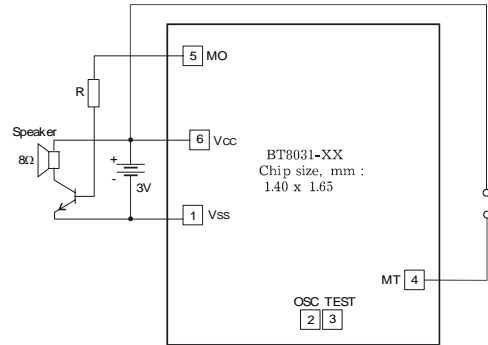
LEVEL HOLD MODE (TO-92)



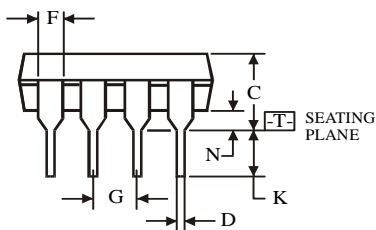
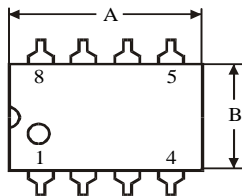
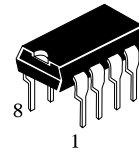
$R = 5 \div 10k\Omega$

NOTE: The chip substrate is connected to Vss.

ONE SHOT MODE (BARE CHIP)



N SUFFIX PLASTIC DIP (MS - 001BA)



$\varnothing 0.25 (0.010) \text{M} \text{T}$

NOTES:

- Dimensions "A", "B" do not include mold flash or protrusions.
Maximum mold flash or protrusions 0.25 mm (0.010) per side.

Symbol	Dimension, mm	
	MIN	MAX
A	8.51	10.16
B	6.1	7.11
C		5.33
D	0.36	0.56
F	1.14	1.78
G	2.54	
H	7.62	
J	0°	10°
K	2.92	3.81
L	7.62	8.26
M	0.2	0.36
N	0.38	

• **TO-92**

