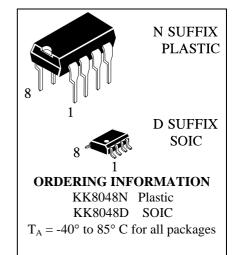


Melody Generator with Accompaniment

KK8048

FEATURES

- Two Sound Sources with Envelope (CR Envelope)
- Melody is inserted up to two.
- According to customer's request, the inserted melody is flexible.
- 3.0V to 5.0V Operating Voltage
- DC or AC Triggered Performance Start Mode (Mask Selected)
- Can Drive an 8 Ohm Dynamic Loudspeaker if Provided Externally with a Transistor
- Bare chip or 8-pin DIP (Plastic) Package available



DESCRIPTION

The KK8048 is a CMOS LSI chip, which plays a prearranged melodies.

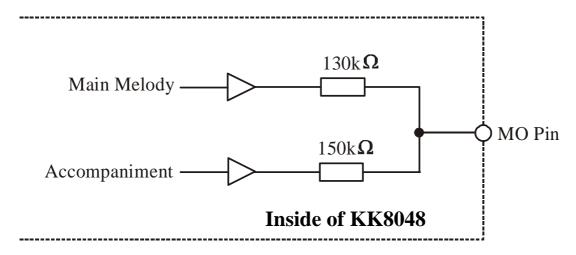
ABSOLUTE MAXIMUM RATINGS ($T_a = 25^{\circ}C$)

Characteristic	Symbol	Value	Unit
Power Supply Voltage	$V_{ m DD}$	- 0.3 to + 7.0	V
Input Terminal Voltage	V_{10}	- 0.2 to $V_{DD} + 0.2$	V
Operating Temperature	T_a	$-40 \text{ to} + 85 \text{ (V}_{SS} = 1.5 \text{V)}$	°C
Storage Temperature	$T_{ m stg}$	- 65 to + 150	°C
Soldering Temperature and Time	$T_{ m sol}$	260°C, 10s (at lead)	

ELECTRICAL CHARACTERISTICS (V_{DD} = 5V, T_a = 25°C; unless otherwise specified)

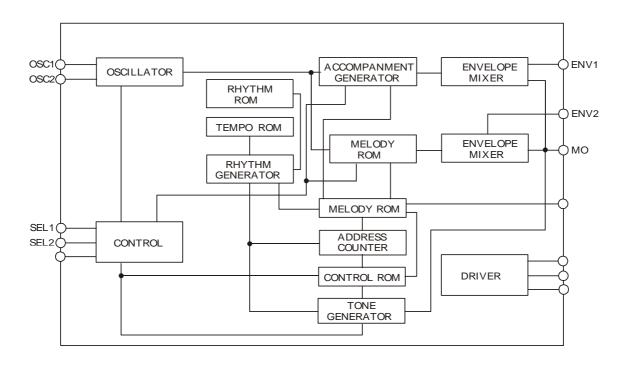
Character	istic	Symbol	Test Condition	Min	Тур	Max	Unit
Operating Voltage		V_{DD}		3.0	5.0	5.5	V
Input Voltage	"1"	V _{IH}		V _{DD} - 0.3	-	V_{DD}	V
	"0"	V _{IL}		V _{SS}	-	$V_{SS} + 0.3$	
MT Power Supply	Time			150			ms
Response Time						600	ms

MO OUTPUT PIN EQUIVALENT CIRCUIT





BLOCK DIAGRAM

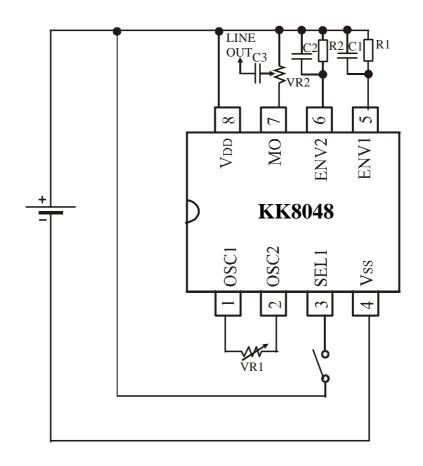


PIN DESCRIPTION

Pin. No.	Pin Name	Pull-Down Resistor	Functions	
1	OSC1	-	A resistor is connected between both terminals to from a ring	
2	OSC2	-	oscillator, or external reference signals are applied to OSC1.	
3	SEL1	Provided	For binary selection: this Terminal in Conjunction with SEL1, selects a Melody. For direct selection: Selects Melody 2 and Controls Start and Stop of it's Performance.	
4	V _{SS}	-	Power Supply Terminal (0V).	
5	ENV1	-	Connects Resistor and Capacitor to add Envelope to Main Melody.	
6	ENV2	-	Connects Resistor and Capacitor to add Envelope to Accompaniment.	
7	MO	-	Output Terminal or Acoustic Signals that have not been Amplified.	
8	V_{DD}	-	3.0V to 5.0V Operating Voltage	



APPLICATION CIRCUIT (basic external connection)



• CR Oscillation, DC Input

RECOMMENDED CONDITIONS FOR EXTERNAL DEVICES

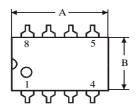
Symbol	Ratings	Unit	Symbol	Ratings	Unit
VR1	1 - 2	MΩ	C1	4.7	μF
VR2	50	kΩ	C2	4.7	μF
R1	100	kΩ	C3	0.1	μF
R2	100	kΩ	-	-	-

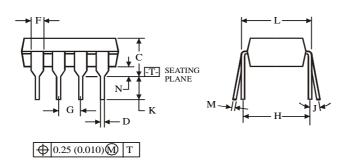
MELODY SELECT TABLE

Switch	SEL1	SEL2	
Melody	SEET	SELZ	
Gong	OFF	OFF	
Bong	ON	OFF	
Up	OFF	ON	
Down	ON	ON	



N SUFFIX PLASTIC DIP (MS – 001BA)





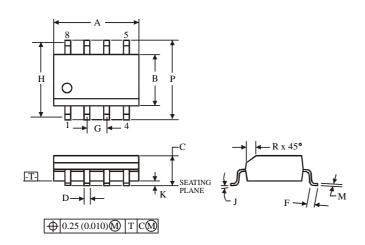
NOTES:

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



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

D SUFFIX SOIC (MS - 012AA)



NOTES:

- 1. Dimensions A and B do not include mold flash or protrusion.
- 2. Maximum mold flash or protrusion 0.15 mm (0.006) per side for A; for B 0.25 mm (0.010) per side.



	Dimension, mm		
Symbol	MIN	MAX	
A	4.8	5	
В	3.8	4	
C	1.35	1.75	
D	0.33	0.51	
F	0.4 1.27		
G	1.27		
Н	5.72		
J	0°	8°	
K	0.1	0.25	
M	0.19 0.25		
P	5.8 6.2		
R	0.25 0.5		