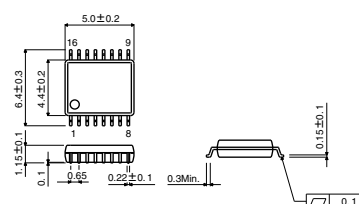


Tone generator LSI for cellular phones **BU8766FV**

●Description

The BU8766FV is a tone generator IC for producing a triple chord that has both a RAM and sequencer to reduce the load of CPU soft. Cellular phones can give a musical performance by down-loading melody data from the C-MIDI format. This IC corresponds to three master clocks and has an adjustment function for a parameter needed to generate a chord. Waveform parameter can be selected from sine wave and special square wave.

●Dimension (Units : mm)



SSOP-B16

●Features

- 1) Triple chord can be generated by control from CPU.
- 2) CPU soft load can be decreased by incorporating RAM and sequencer.
- 3) RAM 1kByte as a buffer for download data.
- 4) Can adjust parameter needed to generate a chord.
- 5) DTMF generating function
- 6) Can select a wave parameter for generating sound.
(sine wave/special square wave)
- 7) Control from CPU by serial data

●Applications

Cellular phones with a function to register melody at receiving the call

●Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Power supply voltage	VDD	− 0.3 ~ + 4.5	V
Power dissipation	Pd	450 *	mW
Operating temperature range	Topr	− 40 ~ + 85	°C
Storage temperature range	Tstg	− 50 ~ + 125	°C

*Derating : 4.5mW/°C for operation above Ta=25°C

●Recommended Operating Conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power supply voltage	VDD	2.2	2.5	3.6	V

●Electrical characteristics (Unless otherwise noted: Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions			
< Digital DC characteristics>									
High level input voltage	VIH	0.7VDD	—	—	V				
Low level input voltage	VIL	—	—	0.3VDD	V				
High level input current	IIH	—	—	10	μ A	VIH=VDD			
Low level input current	IIL	— 10	—	—	μ A	VIH=GND			
High level output voltage	VOH	VDD− 0.3	—	—	V	IOH=− 0.8mA			
Low level output voltage	VOL	—	—	GND+ 0.3	V	IOL=0.8mA			
< Analog DC characteristics>									
VREF pin voltage	VAGND	0.475VDD	0.5VDD	0.525VDD	V	ICUT=0A (No load)			
ANOUT pin voltage	VCUT	0.47VDD	0.5VDD	0.53VDD	V	ICUT=0A (No load)			
< Whole characteristics (VDD=2.5V) >									
Circuit current	IDD1	—	—	1	μ A	RESET=L	Other inputs=L		No load
	IDD2	—	1500	2200	μ A	RESET=H	MCLK=2.68MHz		
	IDD3	—	1700	2500	μ A	Other inputs=L	MCLK=3.25MHz		
	IDD4	—	2500	3400	μ A		MCLK=4.92MHz		
VREF pin rise time	tRVR	—	25	40	nS	At CVREF=1μ F, RESET=L→ H			

●Block Diagram

