Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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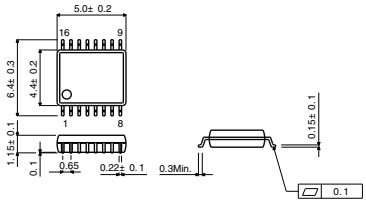
Tone generator LSI for cellular phones
BU8766FV

●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℃)

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

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

• Recommended Operating Conditions (Ta=25℃)

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	μA	VIH=VDD		
Low level input current	IIL	–10	–	–	μA	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	IOUT=0A (No load)		
ANOUT pin voltage	VOUT	0.47VDD	0.5VDD	0.53VDD	V	IOUT=0A (No load)		
<Whole characteristics (VDD=2.5V)>								
Circuit current	IDD1	–	–	1	μA	RESET=L	Other inputs=L	No load
	IDD2	–	1500	2200	μA	RESET=H	MCLK=2.688MHz	
	IDD3	–	1700	2500	μA	Other	MCLK=3.25MHz	
	IDD4	–	2500	3400	μA	inputs=L	MCLK=4.92MHz	
VREF pin rise time	tRVR	–	25	40	mS	At CVREF=1μF, RESET=L→H		

- Block Diagram