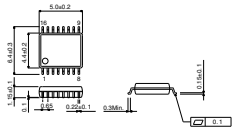
Tone generator LSI for cellular phones
BU8768FV

●Description

The BU8768FV is a tone generator IC for cellular phones that can produce triple chords simultaneously. Tone and volume in each sound source can be controlled separately by serial control. Master volume is integrated. Output can be selected from pseudo sine wave and special square wave. The special square wave is a waveform that can take sound pressure by even a small speaker.

●Dimension (Units : mm)



SSOP-B16

●Features

1) Three chords are generated by CPU control.
2) Master clock (4.8MHz/3.25MHz)
3) Adjustable parameter needed for generating chords.
4) Built-in DTMF generating function
5) Can select a waveform parameter for generating sound.
6) Control from CPU by serial data
7) Built-in LPF for smoothing
8) SSOP-B16 package

●Applications

Melody sound at receiving or holding a call.

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●Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Limits	Unit
Digital block supply voltage	DVDD	—0.3 ~ +4.5	V
Analog block supply voltage	AVDD	—0.3 ~ +4.5	V
Digital pin applied voltage	VDin	DVSS—0.3 ~ DVDD+0.3	V
Analog pin applied voltage	VAin	AVSS—0.3 ~ AVDD+0.3	V
Power dissipation	Pd	450 *	mW
Storage temperature range	Tstg	—50 ~ +125	˚C
Operating temperature range	Topr	—20 ~ +70	˚C

*Derating : 4mW/˚C for operation above Ta=25˚C , (70mmx70mm, t=1.6mm) glass epoxy mounting .

●Electrical characteristics (Unless otherwise noted; Ta=25˚C, DVDD=AVDD=3.0V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Analog block supply voltage	AVDD	2.7	3.0	3.6	V	Difference with DVDD: Less than 0.3V
Current consumption 1	Idd1	—	—	1.8	µA	Clock stop at sleep mode
Current consumption 2	Idd2	—	1.2	2.5	mA	Operating: ATT123=000, f=986Hz pseudo-sine wave
AOUT maximum output (1 sound source) level	Vout	289.0	342.5	415.4	mVrms	ATT123=000, f=986Hz pseudo-sine wave
Load resistance	Rload	20	—	—	k	
Load capacity	Cload	—	—	100	pF	

●Block Diagram