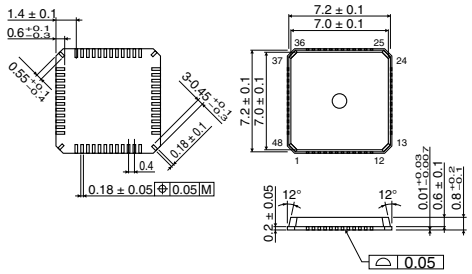
PCM CODEC for Digital cellular phones

BU8776KN

●Description

BU8776KN is PCM CODEC deveolped for digital cellular phones. High-precision linear CODEC and each audio part are integrated into a single chip by mixed signal technology. Compact and thin QFN48U package is adopted.

●Dimension (Units : mm)



QFN48U

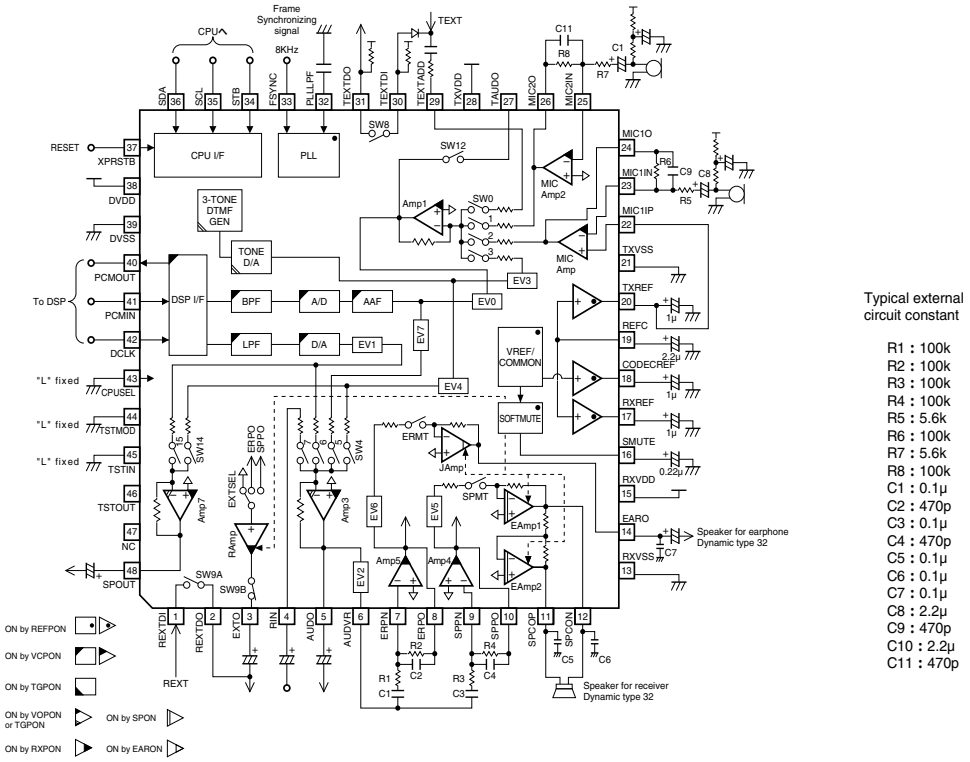
●Features

1) +3V single power supply (V_{DD}=2.7~3.3V)
2) 14bit high-precision linear µ/A-LAW CODEC
3) Transmission filter in CODEC (Based on ITU-T G.714)
4) Built-in PLL circuit for generating system clock
5) Built-in DSP I/F for PDC, N-CDMA
6) Serial I/F for register setting adapted for 3-wire serial type
7) Selectable PCM data transmission clock frequency
   µ/A-LAW 64kHz~2048kHz
   Linear 128kHz~2048kHz
8) Wide variety of Analog I/O functions
   *Built-in two microphone amplifiers
   (Differential input type, single input type)
   *Built-in speaker amplifier for receiver (32 BTL type)
   *Built-in speaker amplifier for earphone (32 single type)
   *Built-in driver amplifier for receiving REXT (600)
   *Built-in electronic volume for gain control
   (Receiving, Transmitting, TONE)
   *Built-in deta signal I/O circuit can connect outside
   *REXT, earphone, and receiver output reduce the pop noise by soft mute when power is ON/OFF.
9) QFN48U small, thin package

●Applications

PDC/CDMA/GSM type digital cellular phones

●Application Circuit



Typical external circuit constant

R1 : 100k
R2 : 100k
R3 : 100k
R4 : 100k
R5 : 5.6k
R6 : 100k
R7 : 5.6k
R8 : 100k
C1 : 0.1µ
C2 : 470p
C3 : 0.1µ
C4 : 470p
C5 : 0.1µ
C6 : 0.1µ
C7 : 0.1µ
C8 : 2.2µ
C9 : 470p
C10 : 2.2µ
C11 : 470p

●Comparision table

Part No.	BU8776KN	BU8730KV	BU8732AKV	BU8731KV	BU8733KV
Function	PCM CODEC	PCM CODEC	PCM CODEC	PCM CODEC	PCM CODEC
Supply voltage range	2.7~3.3V	2.7~3.3V	2.7~3.3V	2.7~3.3V	2.7~3.3V
Operating mode consumption current (TYP.)	8.0mA	8.2mA	8.0mA	8mA	5.4mA
Stand-by mode consumption current (TYP.)	0.1µA	0.1µA	0.1µA	0.1µA	0.1µA
Filter structure	· Digital	· Digital	· Digital	· Digital	· Digital
Dynamic receiver driving	○	×	○	○	○
Speaker output form	BTL	BTL	BTL	BTL	BTL
Speaker output load	32	20k	32	32	32
Amplifier for earphone	○	×	○	○	×
Tone generation	DTMF	DTMF · Triple tone	DTMF	DTMF	DTMF
Tone pattern	16Hz warble	Each for GSM	16Hz warble	16Hz warble	16Hz continuation
Gain control	○	○	○	○	○
Mute function	Soft mute function	Soft mute function	Soft mute function	Soft mute function	Soft mute function
Power down function	Power down in each block	Power down in each block	Power down in each block	Power down in each block	Power down in each block
DAI(Digital Audio Interface)	×	○	×	×	×
Side tone	Inside(Gain control)	Outside(No gain control)	Inside(Gain control)	Inside(Gain control)	Inside(Gain control)
Auxiliary analog input	Single end x2	Single end	Single end x2	Single end x2	Single end
Auxiliary analog output	Single end x2	Single end	Single end x2	Single end x2	Single end
Ringer direct driving	×	×	Gain control	Gain control	Gain control
PCM format	µ/A-LAW Linear	Linear	µ/A-LAW Linear	µ/A-LAW·Linear	µ/A-LAW·Linear
Package	QFN48U	VQFP48	VQFP48	VQFP48	VQFP48