Audio driver IC for mobile phones

BH7826FVM

BH7826FVM is an audio driver IC developed for mobile · audio products such as mobile phones. Low voltage operation, and low power consumption can be realized. Differential input is available for this IC.

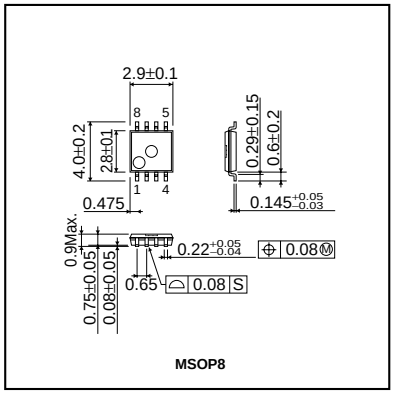
●Applications

Mobile phones, PDA, Notebook PC, DSC, DVC

●Features

1) BTL monaural power amplifier.
2) High power 500mW / 8Ω / BTL output.
3) Wide supply voltage range.
4) For active / shutdown mode.
5) Built-in anti-pop circuit / thermal shutdown circuit

●External dimensions (Units : mm)



●Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Applied voltage	V_{CC} MAX.	6.0	V
Power dissipation	Pd	470 *1	mW
Operating temperature range	Topr	–30~+85 *2	°C
Storage temperature range	Tstg	–55~+125	°C

*1 Derating 4.7mW/°C for operation above Ta=25°C. 70mm×70mm×1.6mm glass epoxy mounting.
*2 TOPR=70~85°C is basic operation range, characteristic and rated output are not guaranteed.In this range if the input signal is exceeded, TSD (Thermal Shutdown) may operate.

●Recommended Operating Conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating supply voltage range	V_{CCS}	2.6	3.6	5.5	V

●**Electrical characteristics (**Unless otherwise noted,Ta=27°C, V_{CC}=−3.6V, f=1kHz, R_L=8Ω)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current 1	I_{CC1}	–	3.5	7	mA	No signal,Active MODE
Circuit current 2	I_{CC2}	–	0	2	μA	No signal,Suspend MODE
Voltage gain	G_{V1}	+9.5	+11.5	+13.5	dB	V_{IN1}=V_{IN2}=−20dBV,Rf/Rs=100k/22k, SE ∗1
Maximum output voltage 1	V_{OM1}	+4.0	+6.0	–	dBV	DSTN=1% BTL ∗1
Distortion rate	DSTN	–	0.2	1.0	%	V_{IN1}=V_{IN2}=−20dBV SE ∗1
Output residual noise	V_{NO}	–	−94	−80	dBV	No signal,SE,Active MODE ∗2
Suspend attenuation value	G_S	–	−107	−80	dBV	V_{IN1}=V_{IN2}=−20dBV,BTL ∗2
BIAS setting voltage	V_{BIAS}	1.6	1.8	2.0	V	3pin DC voltage
Suspend holding voltage / H	V_{SH}	2.0	–	Vcc	V	Active MODE,Hold voltage
Suspend holding voltage / L	V_{SL}	0	–	0.5	V	Suspend MODE,Hold voltage

∗1 : B.W.=0.4~30kHz
∗2 : DIN AUDIO

●**Application Circuit**