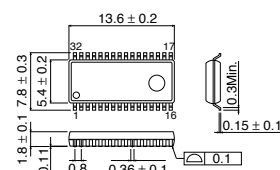


High-performance 5-channel video driver IC for DVD players BH7865FS

● Description

BH7865FS is a 5-channel video driver IC developed for DVD player/recorder. Special filters adjusted to each band of various video signals are incorporated into a single chip. High definition, size reduction and high cost performance can be achieved in DVD players.

● Dimension (Unit : mm)



SSOP-A32

● Features

- 1) Each high-performance filter, 6dB amplifier, and 75Ω driver for DVD are incorporated into a single chip.
- 2) Drive 5ch (Y, C, MIX, Cb, Cr)
- 3) Group delay difference between chroma signal and luminance signal is a small number of nsec.
- 4) Drive 2 lines of each signal
- 5) Operating by 5V single power supply
- 6) Built-in mute circuit

● Applications

DVD players, DVD recorders

● Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Applied Voltage	Vcc max.	6.0	V
Power dissipation	Pd	0.95	W
Operating temperature range	Topr	-10 ~ +70	°C
Storage temperature range	Tstg	-55 ~ +150	°C

* Derating : -7.6mW/°C for operation above Ta=25°C

* PCB (70mmx70mm,t=1.6mm) glass epoxy mounting.

● Recommended Operating Conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power supply voltage	Vcc	4.5	-	5.5	V

● Electrical characteristics (Unless otherwise noted; Ta=25°C, Vcc=5V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Maximum output level	V _{OM}	2.6	3.0	–	V _{pp}	CIN:f=3.58MHz, YIN,CbIN,CrIN:f=1MHz*1
Frequency characteristic1(C)	G _{FC}	-2.0	0	2.0	dB	CIN:f=1.5/3.58MHz,6/3.58MHz,1Vpp
Frequency characteristic1(MIX1)	G _{FMIX1}					CIN:f=1.5/3.58MHz,6/3.58MHz,1Vpp
Frequency characteristic1(MIX2)	G _{FMIX2}					YIN:f=6/1MHz,1Vpp
Frequency characteristic1(Y)	G _{FY}					YIN:f=6/1MHz,1Vpp
Frequency characteristic1(Cb)	G _{FCb}					CbIN:f=3/1MHz,1Vpp
Frequency characteristic1(Cr)	G _{FCr}					CrIN:f=3/1MHz,1Vpp
Mute attenuation	M _T	–	-50	–	dB	CIN:f=3.58MHz, 1Vpp YIN,CbIN,CrIN:f=1MHz,1Vpp
Input impedance	Z _{IN}	16	20	24	kΩ	CIN,CbIN,CrIN input pin *2

● Electrical characteristics (Unless otherwise noted; Ta=25°C, Vcc=5V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Voltage gain (C)	G _{VC}	5.0	6.0	7.0	dB	CIN:f=3.58MHz, 1Vpp
Voltage gain MIX (C)	G _{VMIXC}					CIN:f=3.58MHz, 1Vpp
Voltage gain MIX (Y)	G _{VMIXY}					YIN:f=1MHz,1Vpp
Voltage gain (Y)	G _{VY}					YIN:f=1MHz,1Vpp
Voltage gain (Cb)	G _{VCb}					CbIN:f=1MHz,1Vpp
Voltage gain (Cr)	G _{VCr}					CrIN:f=1MHz,1Vpp
Group delay characteristic Y ↔ C	ΔGD ₁					–
Group delay characteristic Y ↔ Cb (Cr)	ΔGD ₂	–	5.0	–	nsec	YIN:f=1MHz, Vin=1Vpp, CbIN(CrIN):f=1MHz Vin=1Vpp, difference between Y and Cb(Cr) of GD

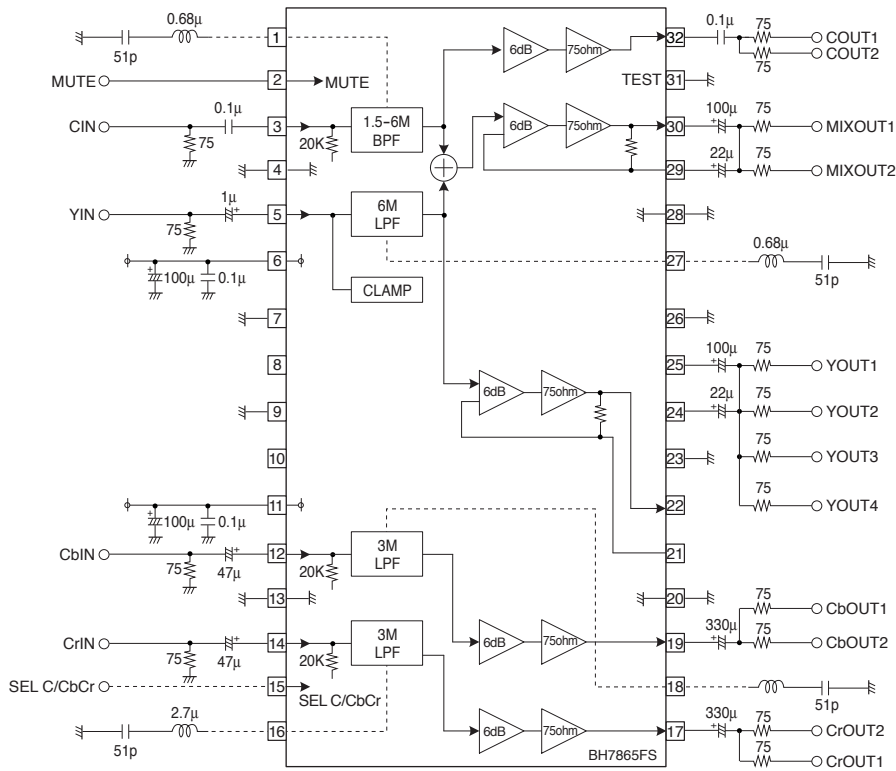
*The input level is adjusted to make the output tertiary distortion -30dB by adding the sine-wave of f=1MHz to the input VIN.

At this input level, Maximum output level of output voltage is V_{OM} (Vpp).

*The input voltage VIN50(V) and the input open voltage VIN(V) is measured when current of 50 μA is inputted to each input CIN, CbIN and CrIN.

At this level, the input impedance ZIN is ZIN=VIN50-VIN/50 μA (kΩ).

● Application circuit



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