

# 3channel 75Ω driver IC for digital STB

## BH7600AFS

BH7600AFS is a 3 channel 75Ω drive IC developed for digital STB. High-frequency of 30MHz is available for 75Ω drive block.

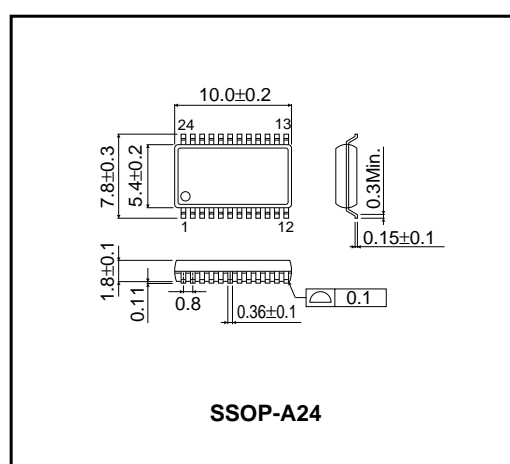
### ●Applications

Digital STB

### ●Features

- 1) 75Ω driver for 30MHz.
- 2) Pedestal clamp input with SYNC mix circuit.
- 3) 3-step output circuit for pin D can be controlled by I<sup>2</sup>C BUS control.
- 4) Mute function.

### ●External dimensions (Unit : mm)



### ●Absolute Maximum Ratings (Ta=25 °C)

Parameter	Symbol	Limits	Unit
Supply voltage	V <sub>CC</sub>	7.0	V
Power dissipation	P <sub>d</sub>	800 *	mW
Operating temperature range	T <sub>opr</sub>	-25 to +75	°C
Storage temperature range	T <sub>stg</sub>	-55 to +125	°C

\* Derating : 8mW/°C for operation above Ta=25°C

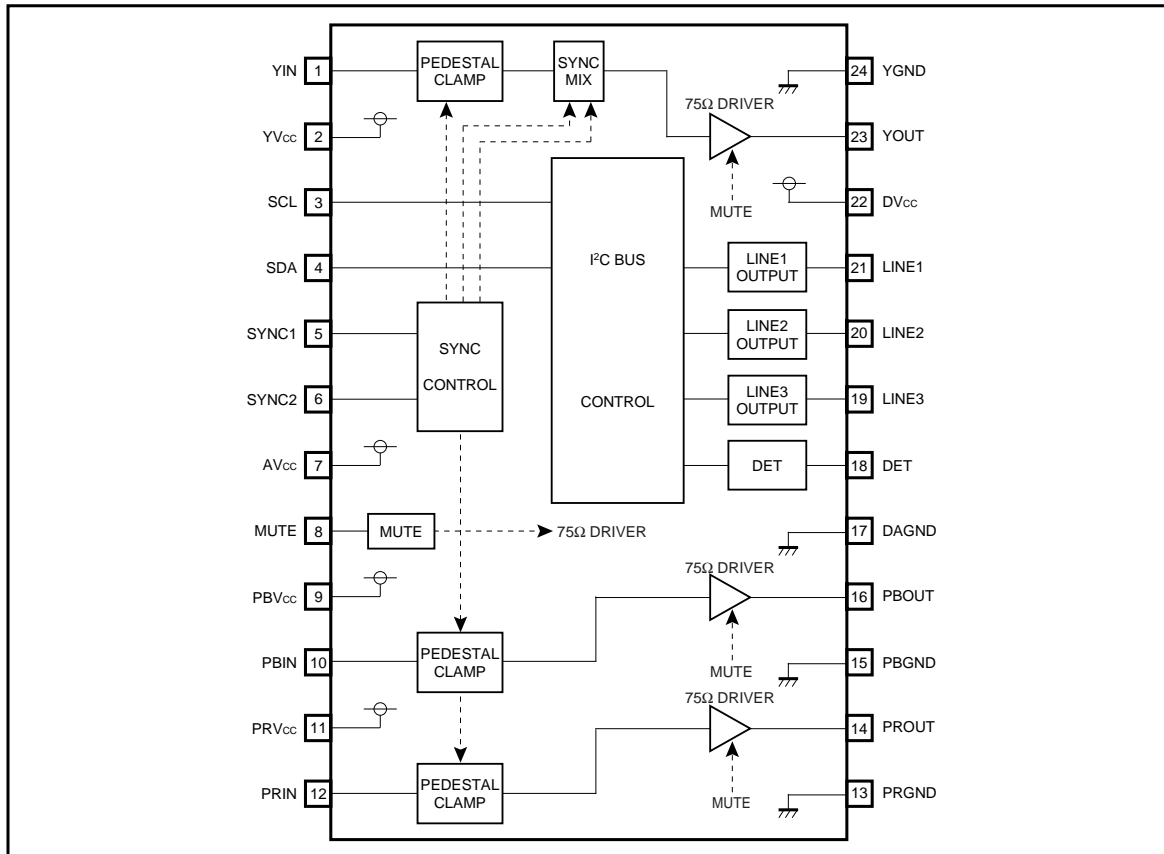
### ●Recommended Operating Conditions (Ta=25 °C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating supply voltage range	V <sub>CC</sub>	4.5	5.0	5.5	V

● **Electrical characteristics** ( Unless other wise noted, Ta=25 , Vcc=5V )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
< Whole device >						
Circuit current	I <sub>CC</sub>	10.8	21.5	32.3	mA	No signal
LINEOUT "H" voltage	V <sub>LOH</sub>	4.0	4.9	5.0	V	
LINEOUT "M" voltage	V <sub>LOM</sub>	1.5	1.9	2.3	V	
LINEOUT "L" voltage	V <sub>LOL</sub>	0.0	0.2	0.5	V	
LINEOUT impedance	Z <sub>LO</sub>	1.3	1.8	2.3	kΩ	
< Clamp input 75Ω drive block >						
Voltage gain	G <sub>V</sub>	-1	-0.5	0	dB	V <sub>IN</sub> =1V <sub>P-P</sub> , f=1MHz
Frequency characteristic 1	V <sub>F1</sub>	-1	0	1	dB	V <sub>IN</sub> =1V <sub>P-P</sub> , f=1M/10MHz
MUTE input block impedance	Z <sub>IN</sub>	75	100	125	kΩ	
MUTE "H" level input voltage	V <sub>MH</sub>	2.0	-	V <sub>CC</sub>	V	
MUTE "L" level input voltage	V <sub>ML</sub>	0	-	1.0	V	
< SYNC >						
SYNC1,2 "H" level input voltage	V <sub>SYNH</sub>	2.0	-	V <sub>CC</sub>	V	
SYNC1,2 "L" level input voltage	V <sub>SYNL</sub>	0	-	-	V	
SYNC input bias current	I <sub>SYN</sub>	0	-2.0	20	μA	
SYNC mix level	V <sub>SYL</sub>	270	300	1.1	mV	
< Control block >						
"H" level input voltage	V <sub>H</sub>	2.0	-	V <sub>CC</sub>	V	
"L" level input voltage	V <sub>L</sub>	0	-	1.0	V	
SDA "L" sink current	I <sub>SIN</sub>	4.0	-	-	mA	
DET detection level "H"	V <sub>DH</sub>	2.0	-	V <sub>CC</sub>	V	
DET detection level "L"	V <sub>DL</sub>	0	-	1.0	V	
DET input bias current	I <sub>DET</sub>	0	-2.0	-20	μA	

## ●Block diagram



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