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SSOP-A32

# 4-channel PWM driver for CD, MD player **BH6519FS**

### Description

WWW.DZSC. Dimension (Units : mm)

The BH6519FS is a 4-channel PWM driver developed for both motor and actuator driving functions in CD and MD players. The device requires lower power consumption due to the adoption of power MOSFET in the output.

### Features

- 1) Built-in 4ch power MOSFET H bridge
- 2) PWM input
- 3) Built-in charge pump circuit for VG step-up
- 4) ON resistance  $1.2\Omega(Typ.)$
- 5) Built-in thermal shut down circuit
- 6) Low power consumption
- 7) Small SSOP-A32 package WWW.DZSC.COM

Applications

CD, MD players

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

Parameter	Symbol	Limits	Unit
H bridge supply voltage	Vм	9	V
Control circuit supply voltage	Vdd	9	V
Pre-driver supply voltage	VG (2pin)	12	V
Driver output current	lo	1000	mA
Power dissipation	Pd	850 *	mW
Operating temperature range	Topr	-40 ~ +85	°C
Storage temperature range	Tstg	-55 ~ +150	°C

\*Derating : 6.8mW/°C for operation above Ta=25°C

70mmx70mm, t=1.6mm, glass epoxy mounting.

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

Parameter	Symbol	Min.	Тур.	Max.	Unit
H bridge supply voltage	Vм *	1.6	5.0	5.5	V
Control circuit supply voltage	Vdd	2.7	3.0	<u>5.5</u>	V
Pre-driver supply voltage	VG(2pin)	Vм+3.0	10	11.5	V
Pulse input frequency	fIN	.C.D.m.	176.4	200	kHz

\*When the built-in charge pump is not used. When it is used : 2.7V~5.5V



### •Electrical characteristics

(Unless otherwise noted; Ta=25°C, VM=5V, VDD=3V, VG=Built-in step-up output, fiN=176kHz, RL=8Ω-47μH)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions		
H bridge supply current								
No input	IMST	—	410	580	μA	VDD=3V, VM=5V		
Control circuit supply current								
No input	IDD1	—	100	210	μA			
Operating	IDD2	_	110	220	μA	IDD1+4CH simultaneous drive		
PSB	IDD3	—	_	1	μA			
Pre drive supply voltage (Charge pump output)								
No input	VGST	8.8	9.95	12	V			
Operating	VGA	7.9	8.5	11	V	4CH simultaneous drive		
Logic input characteristic								
'H' level input voltage	VIH	Vdd-0.6	_		V			
'L' level input voltage	VIL	_	—	0.6	V			
'H' level input current	IIH	—	—	1	μA			
'L' level input current	IIL	—1	—	—	μA			
Output ON resistance	RON	_	1.2	2.0	Ω	ON resistance (Top+bottom) VM=2.5V, VDD=3V, VG=10V (VG is supplied outside.)		
Output propagation	tRISE	—	0.2	1	μsec			
delay time	tFALL	—	0.2	1	μsec			
Minimum output pulse width	tмin	150	—	—	nsec	Output pulse width: More than 2/3tMIN		
Oscillation frequency	fosc	150	370	520	kHz	31PIN waveform monitor		

\*This product is not designed for protection against radioactive rays.

### Block Diagram



# Appendix

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