



## Nch MOSFET Driver IC for Load Switching BD2270HFV

### ● Outline

The BD2270HFV is an Nch MOSFET driver IC that integrates a charge pump driver and discharge circuit, enabling configuration of a high performance load switch circuit. In addition, analog control input allows control of the power up sequence.

### ● Features

- 1) Charge pump circuit integrated for external Nch MOSFET drive
- 2) Output discharge circuit
- 3) Soft start circuit
- 4) Built-in analog control input for power up sequence control

### ● Applications

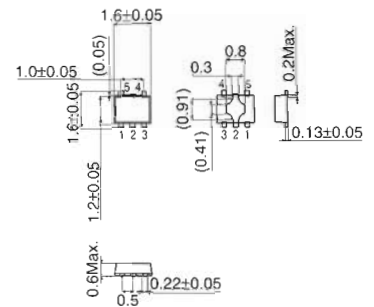
PCs, digital cameras, digital video cameras, portable digital audio players, LCD TVs, PDB TVs, car navigation systems, and any device requiring general load switching.

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

Parameter	Symbol	Limits	Unit
Supply Voltage	VCC	-0.3 to 6.0	V
AEN Terminal Voltage	VAEN	-0.3 to 6.0	V
GATE Terminal Voltage	VGATE	-0.3 to 15.0	V
DISC Terminal Voltage	VDISC	-0.3 to 6.0	V
Storage Temperature Range	Tstg	-55 to 150	°C
Permissible Loss	Pd	669 <sup>*1</sup>	mW

\*1 When mounted on a 70mm×70mm×1.6mm glass epoxy PCB  
Dered at 5.352mW/°C above Ta=25°C

### ● Dimensions (Unit: mm)



HVSO5

- The specifications for the product described in this document are for reference only. Upon actual use, therefore, please request that specifications to be separately delivered.
- The application circuit examples, information, and various data pertaining to the use of the products presented in this documentation are provided for reference purposes only.
- Please note that ROHM cannot bear any responsibility regarding any problems relating to industrial property rights resulting from their use thereof.

The products listed in this catalog are designed to be used with ordinary electronic equipment or devices (such as audio visual equipment, office-automation equipment, communications devices, electrical appliances and electronic toys).  
Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

Current specifications in effect of 1st. September 2007.

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ROHM CO., LTD.

21, Saiira Mizosaki-cho, Ukyo-ku, Kyoto  
615-8585, Japan  
TEL: +81-75-311-2121 FAX: +81-75-315-0172  
URL: <http://www.rohm.com>

Contact us for further information about the products.

Seoul TEL: +82-2-8182-700 FAX: +82-2-8182-7115  
Dalian TEL: +86-411-8230-8549 FAX: +86-411-8230-8537  
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TEL: +81-45-476-2290 FAX: +81-45-476-2295



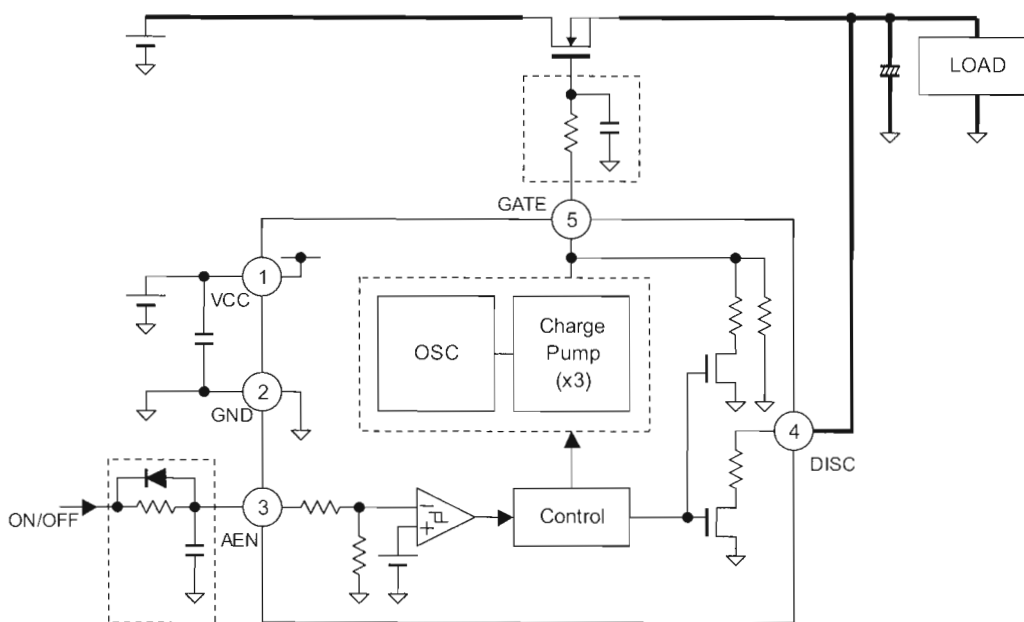
● Recommended Operating Range

Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply Voltage	VCC	2.7	–	5.5	V
Operating Temperature Range	TOPR	–25	–	85	°C

● Electrical Characteristics (VCC=3V, Ta=25°C unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Operating Current	ICC	–	50	75	μA	AEN=VCC
Standby Current	ISTB	–	5	10	μA	AEN=0V
AEN Input Voltage	VAENH	1.55	2.0	2.45	V	High level input
	VAENL	1.35	1.9	2.35		Low level input
AEN Input Current	IAEN	–	3	5	μA	AEN=3V
GATE Output Voltage	VGATE	10	13.5	15.0	V	VCC=5V
		6.6	9.5	9.9	V	VCC=3.3V
		6	8.5	9	V	VCC=3V
GATE Output Rise Time	TON	–	130	750	μs	CGATE=500pF VCC=3V VGATE > VCC+1V
GATE Output Fall Time	TOFF	–	18	60	μs	CGATE=500pF VCC=3V VGATE < 0.5V
DISC Resistance	RDISC	–	200	350	Ω	AEN=0V

● Block Diagram



**BD2270HFV**