

DDR-SDRAM Termination Regulator BD3531F

●Description

BD3531F is a regulator developed as termination power supply of standard DDR-SDRAM that is used for PC.

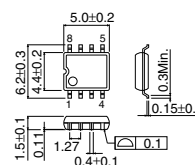
Industry's highest speed of transient response characteristic is realized. The built-in FET can sink and source load current of 1.5A(max.)

Waveform quality when data is transferred at high speed can't be deteriorated.

BD3531F meets the bus line standards SSTL-2 of DDR-SDRAM.

High-reliability can be realized for any applications using DDR-SDRAM.

●Dimension (Unit : mm)



SOP8

●Features

- 1) Built-in push-pull regulator for termination(VTT)
- 2) Built-in reference voltage circuit(VREF)
- 3) Built-in enable function
- 4) Built-in under voltage lock out circuit
- 5) Package SOP8
- 6) Built-in thermal shut down circuit

●Applications

Note personal computer, Desktop personal computer

●Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Input voltage	VCC	7 *1	V
Termination input voltage	VTT_IN	7 *1	V
VDDQ reference voltage	VDDQ	7 *1	V
Power dissipation 1	Pd1	560 *2	mW
Power dissipation 2	Pd2	690 *3	mW
Operating temperature range	Topr	-10 ~ +100	°C
Storage temperature range	Tstg	-55 ~ +150	°C

* 1 Should not exceed Pd.

* 2 Reduced by 4.48mW for each increase in Ta of 1°C over 25°C(With no heat sink).

* 3 Reduced by 5.52mW for each increase in Ta of 1°C over 25°C(PCB(70mm×70mm×1.6mm)glass epoxy mounting.)

● Recommended Operating Conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Input voltage	VCC	4.5	—	5.5	V
Termination input voltage	VTT_IN	1.7	—	2.6	V

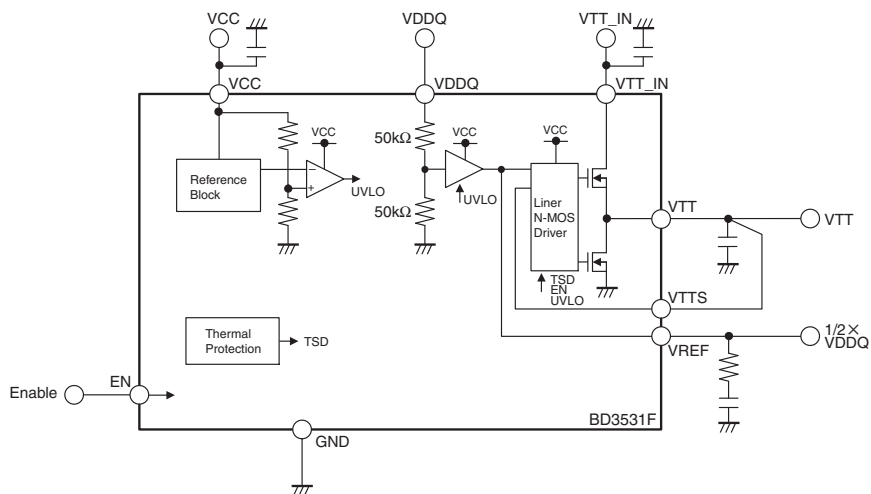
*This product is designed for protection against radioactive rays.

● Electrical characteristics (Unless otherwise noted, Ta=25°C, VCC=5V, VEN=3V, VDDQ=2.5V, VTT_IN=2.5V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Standby current	IST	—	0.8	1.6	mA	VEN=0V
Bias current	ICC	—	2	4	mA	
<Termination>						
Termination voltage	VTT	VREF-30mV	VREF	VREF+30mV	V	I _o =-3A to 3A, Ta=0°C to 100°C *
Source current	ITT+	1.5	—	—	A	
Sink current	ITT-	—	—	-1.5	A	
Upper side ON resistance	HRON	—	0.4	0.8	Ω	
Lower side ON resistance	LRON	—	0.4	0.8	Ω	
<Reference voltage>						
Output voltage	VREF	1/2 × VDDQ-50mV	1/2 × VDDQ	1/2 × VDDQ+50mV	V	I _{REF} =-10mA to 10mA Ta=0°C to 100°C *
Source current	IREF+	10	20	—	mA	
Sink current	IREF-	—	-20	-10	mA	
<UVLO>						
UVLO OFF voltage	VUVLO	4.2	4.35	4.5	V	VCC : Sweep up
Hysteresis voltage	Δ VUVLO	100	160	220	mV	VCC : Sweep down

* Design Guarantee

● Application Circuit





LittleDiode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.