

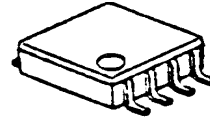
Single-phase DC Brushless Motor Driver IC

■ GENERAL DESCRIPTION

The NJU7364 is a single phase motor driver IC. It features a MOS FET motor driver, hall bias output, FG output and thermal shutdown circuit.

The driver is capable of 700mA maximum output current and continuous current of 250mA.

■ PACKAGE OUTLINE

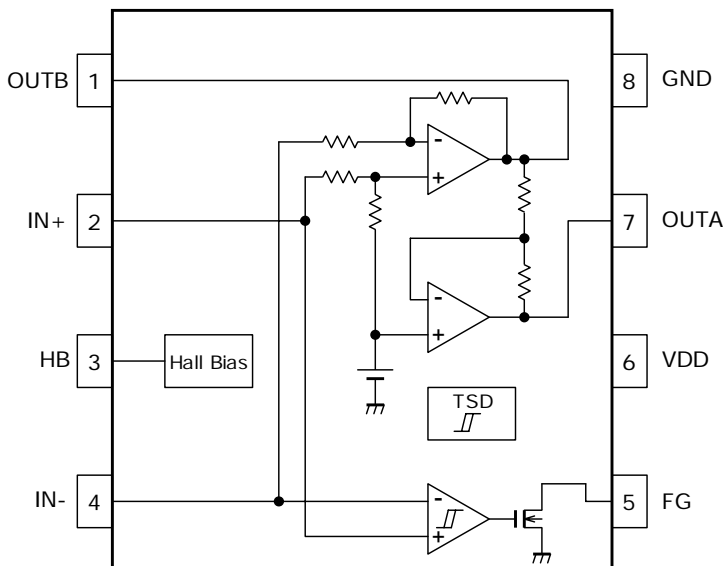


NJU7364RB1

■ FEATURES

- Supply Voltage $V_{DD}=2.0$ to $5.5V$
- Low Quiescent Current $I_{DD}=1mA$ typ.
- Output Voltage $V_{OM}=\pm 0.30V$ typ. @ $I_o=\pm 250mA$
- Hall Bias Terminal
- FG Output
- Thermal Shutdown Circuit
- CMOS Technology
- Package Outline TVSP8

■ BLOCK DIAGRAM



■ PIN FUNCTION

PIN No.	PIN NAME
1	OUTB
2	IN+
3	HB
4	IN-
5	FG
6	VDD
7	OUTA
8	GND

NJU7364

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS		UNIT
Supply Voltage	V _{DD}	+7		V
Input Voltage	V _{ID}	-0.3 to V _{DD}		V
Output Current (Peak)	I _{OPEAK}	600		mA
FG Output Current	I _{FG}	10		mA
FG Output Voltage	V _{FG}	+7		V
Power Dissipation	P _D	Device itself	400	mW
		(*1) Mounted on 2Layer Board	580	
Operating Temperature	Topr	-40 to +85		°C
Junction Temperature	Tjmax	150		°C
Storage Temperature	Tstg	-50 to +150		°C

(*1) Mounted on EIA/JEDEC STD 2Layer Board

■ RECOMMENDED OPERATING CONDITIONS

(Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage	V _{DD}	-	2.0	5	5.5	V
Input Common mode Voltage Range	V _{ICM}	-	0.4	-	4.0	V

■ ELECTRICAL CHARACTERISTICS

($V_{DD}=5V, T_a=25^{\circ}C$)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
■ GENERAL						
Quiescent Current	I_{DD}	$IN+=4V, IN-=0.4V$	-	1.0	2.0	mA
Thermal shutdown operating temperature	T_{TSD}	No-load	-	180	-	$^{\circ}C$
Thermal shutdown Hysteresis	T_{HYS}	No-load	-	50	-	$^{\circ}C$
■ HALL AMP BLOCK						
Input offset Voltage	V_{IO}	No-load	-10	-	10	mV
Close-loop Gain	A_V	No-load	-	44	-	dB
■ OUTPUT BLOCK						
Output Voltage	V_{OH}	$I_O=-250mA$	4.55	4.7	-	V
	V_{OL}	$I_O=250mA$	-	0.3	0.45	V
FGL Output Voltage	V_{FG}	$I_{FG}=3mA$	-	-	0.3	V
FGH Leak Current	$I_{FG-LEAK}$	$V_{FG}=5V$	-	-	5.0	μA
■ HALL BIAS BLOCK						
Hall Bias Voltage	V_{HB}	$I_{HB}=-5mA$	1.1	1.3	1.5	V

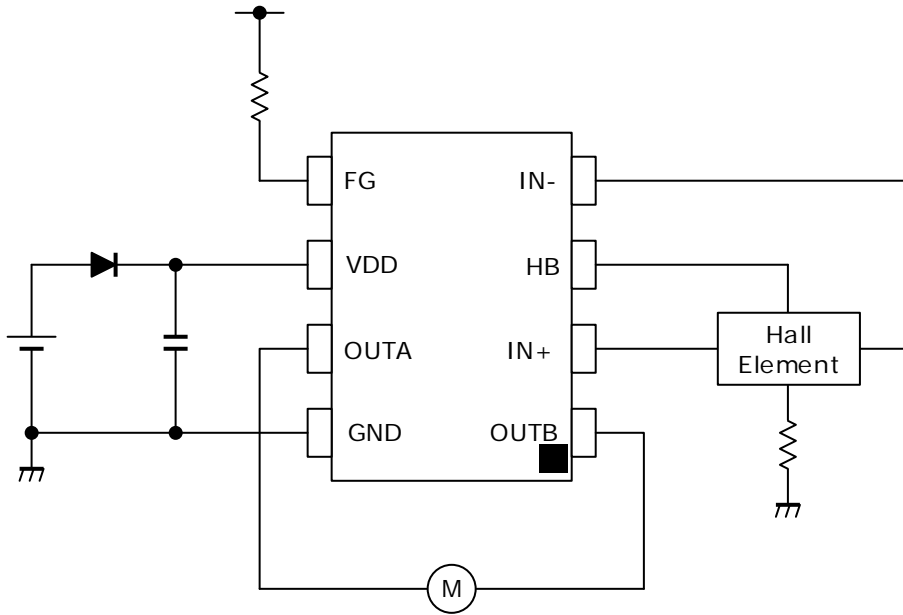
■ TRUTH TABLE

IN+	IN-	OUTA	OUTB	FG
H	L	H	L	L (FET Output: ON)
L	H	L	H	Z (FET Output: OFF)

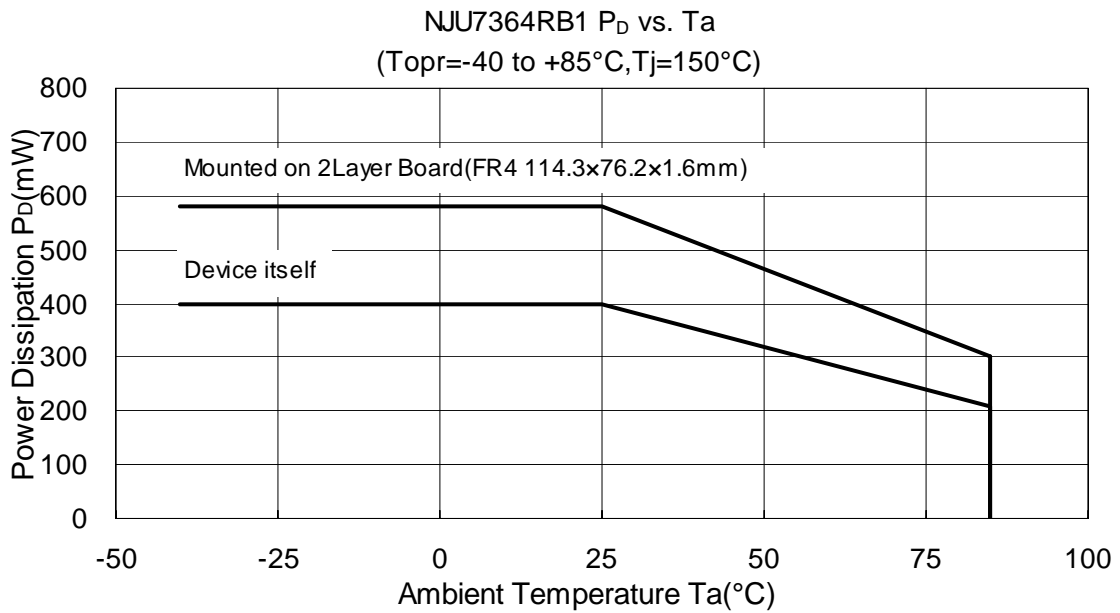
※ Z : High-impedance

NJU7364

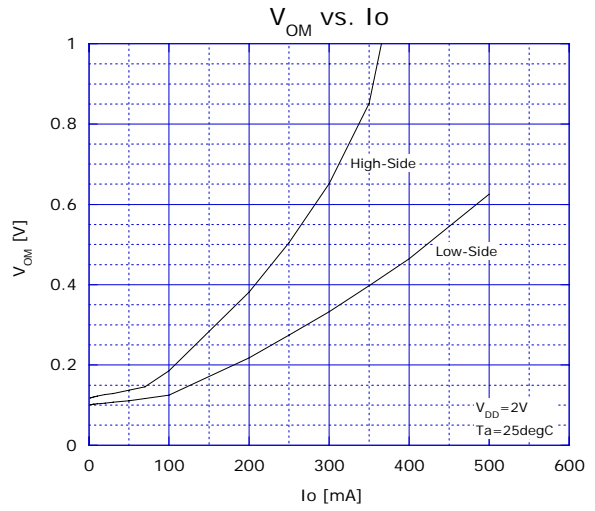
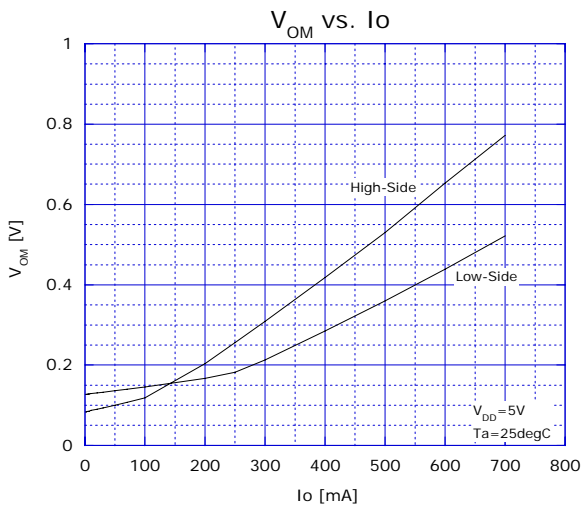
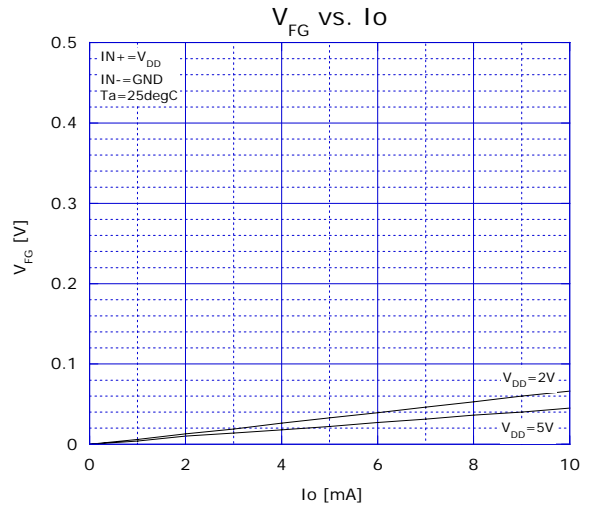
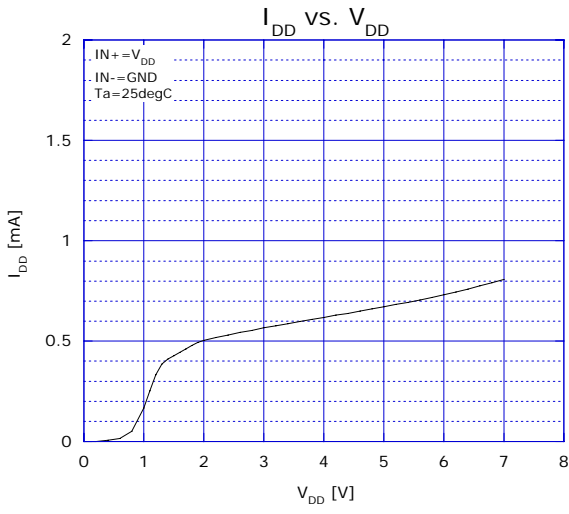
■ TYPICAL APPLICATION CIRCUIT



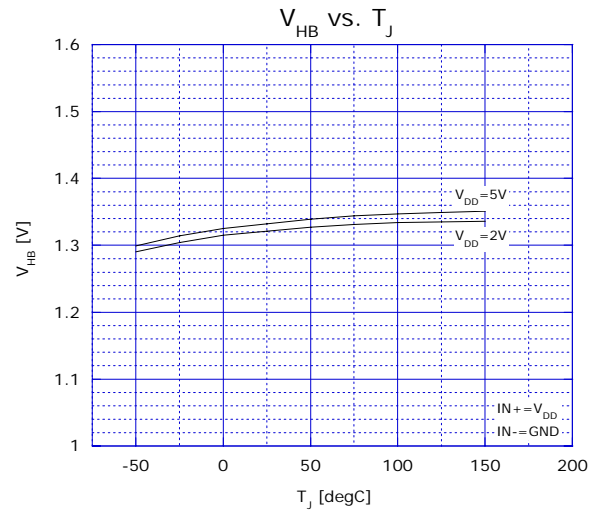
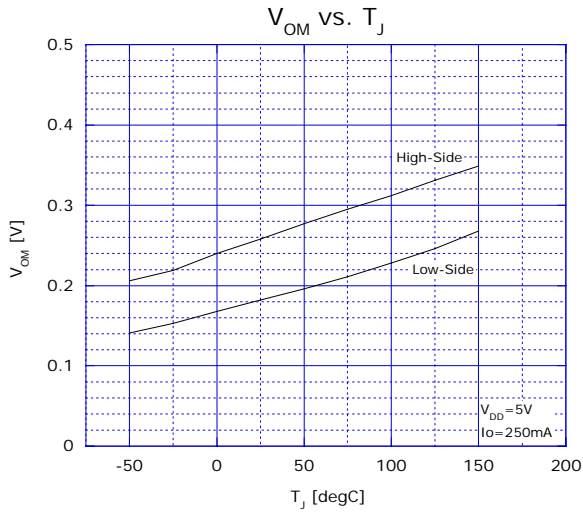
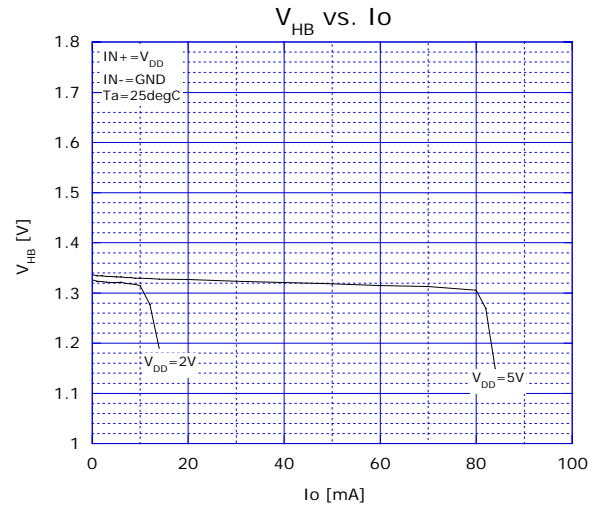
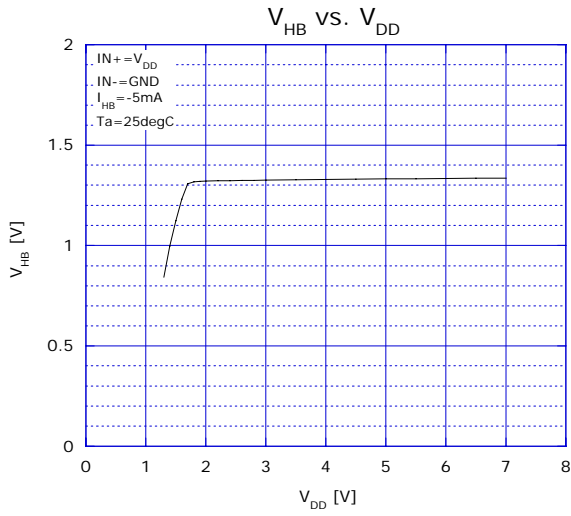
■ POWER DISSIPATION vs. AMBIENT TEMPERATURE



TYPICAL CHARACTERISTICS



TYPICAL CHARACTERISTICS



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