

T-52-13-90 **D469A**

Quad High-Current, High-Speed Power Driver

FEATURES

- Wide Voltage Range
- High Current Drive
- Fast Rise and Fall Times
- Low Power Consumption
- Single Power-Supply
- Low Output Impedance
- Logic Friendly
- ESD Protection

APPLICATIONS

- Power Supplies
- Motor Drives
- DC/DC Converters

END PRODUCTS

- Computers
- Printers
- Avionics
- Industrial Controllers
- Robotics
- Central Office Equipment

DESCRIPTION

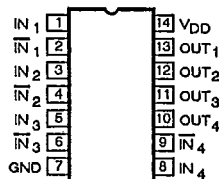
The D469A is a quad monolithic high current and speed driver designed to interface logic level signals to power MOSFETs, at voltages up to 15 V, in motor controls and other power control applications. This 4-channel power driver can source or sink up to 1 A.

The D469A is available in 14-pin CerDIP and plastic packages. Performance grades include the military, A suffix (-55 to 125°C), and industrial, D suffix (-40 to 85°C) temperature ranges.

PIN CONFIGURATION

FUNCTIONAL BLOCK DIAGRAM

Dual-In-Line Package



Top View

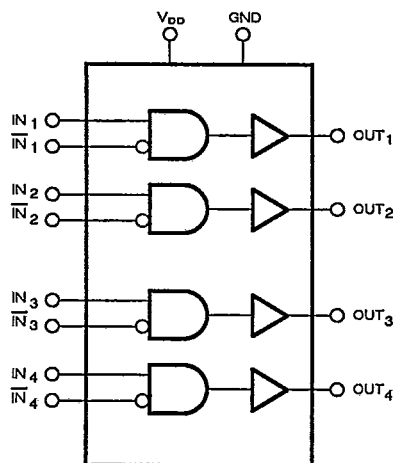
Order Numbers:

CerDIP: D469AAK

Plastic: D469DJ

Truth Table

IN _x	$\overline{\text{IN}}_x$	OUT _x
0	0	LO
0	1	LO
1	0	HI
1	1	LO



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Advance Information

D469A**ABSOLUTE MAXIMUM RATINGS****T-52-13-90 -**

Ambient Temperature Under

Bias -55 to 125°C

Storage Temperature -65 to 150°C

Voltage on Any Pin with Respect

to Ground -0.3 to $V_{DD} + 0.3$ VSupply Voltage, V_{DD} -0.3 to 18 V

Peak Output Current

(Pulsed at 1 ms, 2% Duty Cycle) ± 1.0 A

K Package J Package

Operating Temperature -55 to 125°C -40 to 85°C

Junction Temperature 150°C 125°C

Power Dissipation 1000 mW 750 mW

Derating 10 mW/°C 6 mW/°C
above 50°C above 25°C θ_{JA} 100°C/W 167°C/W
(No Airflow) (No Airflow)**ELECTRICAL CHARACTERISTICS^a**

PARAMETER	SYMBOL	TEST CONDITIONS Unless Otherwise Specified $V_{DD} = 15\text{ V}$			LIMITS		UNIT
					A, D SUFFIX		
			TEMP	TYP ^d	MIN ^b	MAX ^b	
INPUT							
Input Voltage HIGH	V_{INH}		1,2,3		2.4		V
Input Voltage LOW	V_{INL}		1,2,3			0.8	
Input Current with Input Voltage HIGH	I_{INH}	$V_{IN} = V_{DD}$	1,2			10	μA
Input Current with Input Voltage LOW	I_{INL}	$V_{IN} = 0\text{ V}$	1,2		-10		
OUTPUT							
Output Voltage HIGH	V_{OUTH}	$I_{OUT} = -100\text{ mA}$ One Output at a Time	1,2,3		14		V
		$I_{OUT} = -10\text{ mA}$	1,2,3		14.9		
Output Voltage LOW	V_{OUTL}	$I_{OUT} = 100\text{ mA}$ One Output at a Time	1,2,3			1	V
		$I_{OUT} = 10\text{ mA}$	1,2,3			0.1	
Output Source Current	I_{OS+}	2% Duty Cycle	1	1			A
Output Sink Current	I_{OS-}		1	-1			
Output Resistance	R_{OUT}	$V_{IN} = V_{IL}, I_{OUT} = -10\text{ mA}$	1	6		10	Ω
		$V_{IN} = V_{IL}, I_{OUT} = 10\text{ mA}$	1	6		10	
DYNAMIC							
Propagation Delay	t_{px}	$C_L = 1000\text{ pF}$	1 2	30		50 80	ns
Rise Time	t_r		1	20		50	
Fall Time	t_f		1	20		50	
Input Capacitance	C_{in}		1	5			pF



D469A

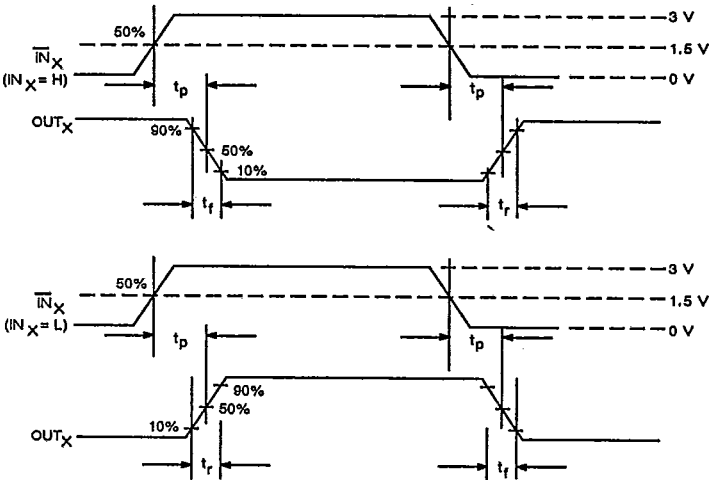
T-52-13-90

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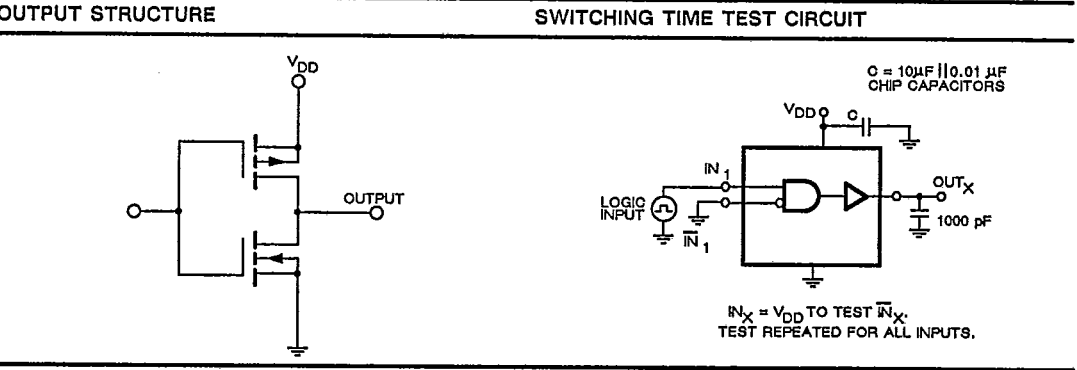
ELECTRICAL CHARACTERISTICS ^a							
PARAMETER	SYMBOL	TEST CONDITIONS Unless Otherwise Specified $V_{DD} = 15\text{ V}$			LIMITS		UNIT
					A, D SUFFIX		
			TEMP	TYP ^d	MIN ^b	MAX ^b	
SUPPLY							
Supply Current	I_{DD}	$I_{NX} = \overline{I_{NX}} = 0\text{ V}, V_{DD} = 15.75\text{ V}$	1,2	-8		1	mA
		$I_{NX} = \overline{I_{NX}} = 3\text{ V}, V_{DD} = 15.75\text{ V}$	1 2,3	15		20 30	
		$f = 100\text{ kHz}, V_{DD} = 15.75\text{ V}$ $C_L = 1000\text{ pF}, \text{One Output at a Time}$	1	6			

^aRefer to PROCESS OPTION FLOWCHART for additional information.
^bThe algebraic convention whereby the most negative value is a minimum and the most positive a maximum, is used in this data sheet.
^cGuaranteed by design, not subject to production test.
^dTypical values are for DESIGN AID ONLY, not guaranteed nor subject to production testing..

AC TESTING CONDITIONS

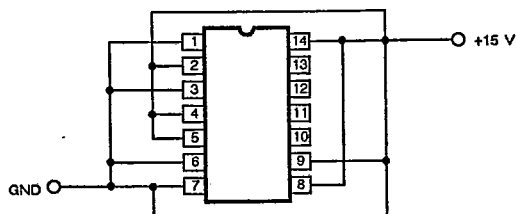


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D469A

BURN-IN DIAGRAM

T-52-13-90**PIN DESCRIPTION**

SYMBOL	DESCRIPTION
IN_X	Non-Inverting Logic Control Input
$\overline{IN}_X$	Inverting Logic Control Input
GND	Ground
OUT	Buffered Output
V_{DD}	Positive Supply Voltage