



T-52-17 D469

# Quad High-Current Power Driver

## FEATURES

- High Current Drive (Up to 1A)
- Single Power-Supply
- TTL/CMOS Compatible Inputs

## BENEFITS

- Efficient Drive For Large MOSPOWER FETs
- Low Standby Power Consumption
- Easily Interfaced

## APPLICATIONS

- H-Bridge Drives
- Motor Drives
- Complementary Switching

## DESCRIPTION

The D469 is a quad high current driver designed to interface low current logic to power MOSFETs in motor controls and other power control applications. This 4-channel power driver can source or sink up to 1 A at 2% duty cycles or  $\pm 250$  mA continuously.

is built on the Siliconix PolyMOS™ process. An epitaxial layer prevents latchup.

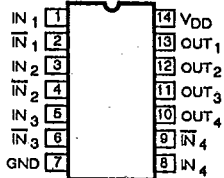
The D469 is available in 14-pin side braze and plastic packages. Performance grades include the military, A suffix (-55 to 125°C), Industrial, B suffix (-25 to 85°C), and commercial, C suffix (0 to 70°C) temperature ranges. For further information please refer to application note AN88-1.

To achieve high current driving capability, the D469

## PIN CONFIGURATION

## FUNCTIONAL BLOCK DIAGRAM

Dual-In-Line Package

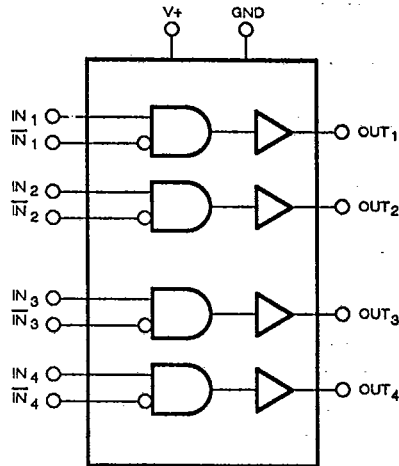


Top View

Order Numbers:  
Side Braze: D469AP, D469AP/883,  
D469BP  
Plastic: D469CJ

Truth Table

IN <sub>X</sub>	$\overline{\text{IN}}_X$	OUT <sub>X</sub>
0	0	GND
0	1	GND
1	0	V <sub>DD</sub>
1	1	GND



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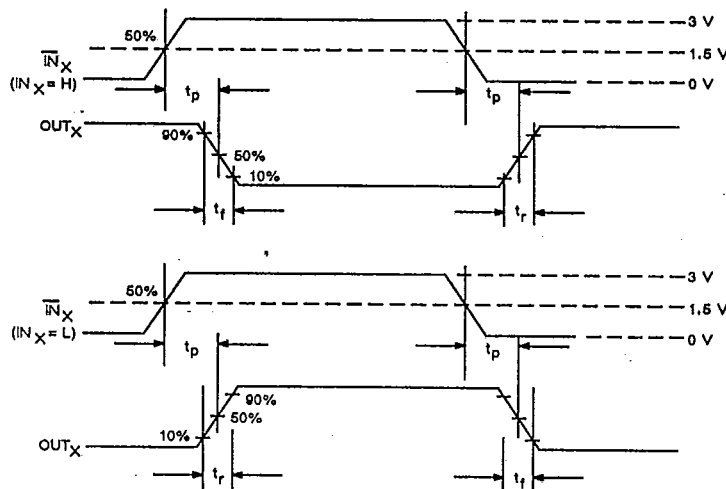
D469

ELECTRICAL CHARACTERISTICS <sup>a</sup>							
PARAMETER	SYMBOL	Test Conditions Unless Otherwise Specified:  $V_{DD} = 12\text{ V}$	LIMITS				UNIT
			1=25°C 2=125,85°C 3=-55,-40°C		A,B,C SUFFIX		
			TEMP	TYP <sup>c</sup>	MIN <sup>b</sup>	MAX <sup>b</sup>	
<b>DYNAMIC</b>							
Propagatlon Delay	$t_{px}$	$C_L = 500\text{ pF}$	1	60		100	ns
			2			150	
Rise Time	$t_r$		1	25			
Fall Time	$t_f$			1	30		
Input Capaoltance	$C_{in}$		1	5			pF
<b>SUPPLY</b>							
Supply Current	$I_{DD}$	$IN_X = \bar{IN}_X = 0\text{ V}, V_{DD} = 12.6\text{ V}$	1	3		7.5	mA
			2			10	
		$IN_X = \bar{IN}_X = 3\text{ V}, V_{DD} = 12.6\text{ V}$	1,2	10		20	
		$f = 100\text{ kHz}, V_{DD} = 12.6\text{ V}$ $C_L = 500\text{ pF}$ One Output at a Time	3			30	
			1	7		20	
			2			20	

NOTES:

- a. Refer to PROCESS OPTION FLOWCHART for additional information.
- b. The algebraic convention whereby the most negative value is a minimum and the most positive a maximum, is used in this data sheet.
- c. Typical values are for DESIGN AID ONLY, not guaranteed nor subject to production testing.

AC TESTING CONDITIONS

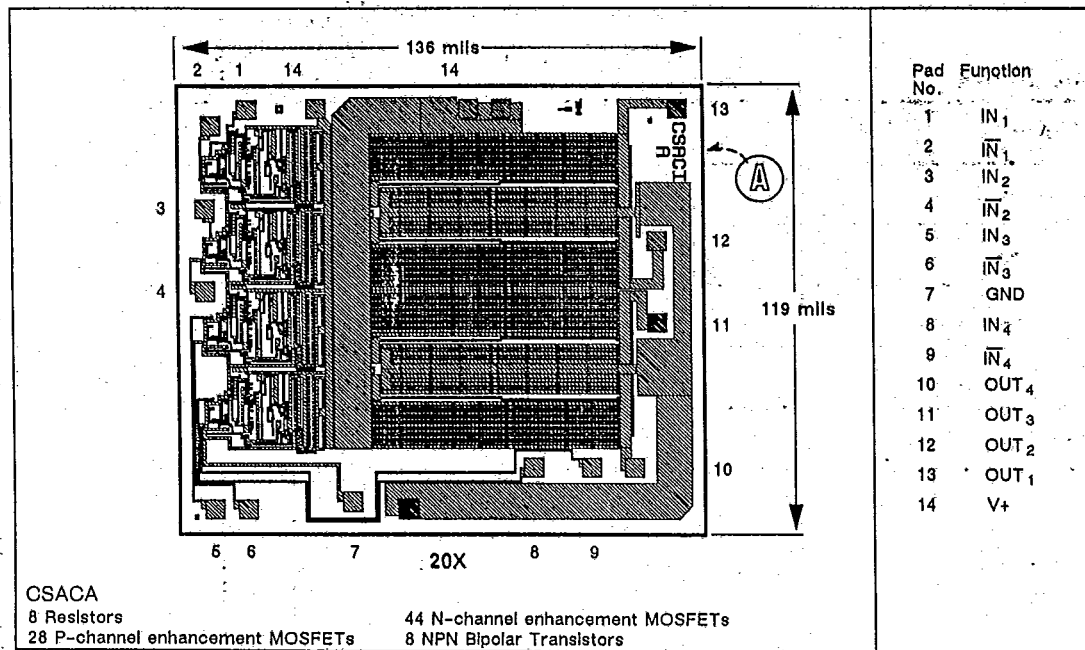


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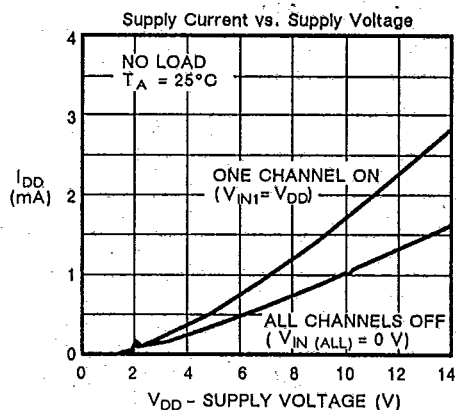
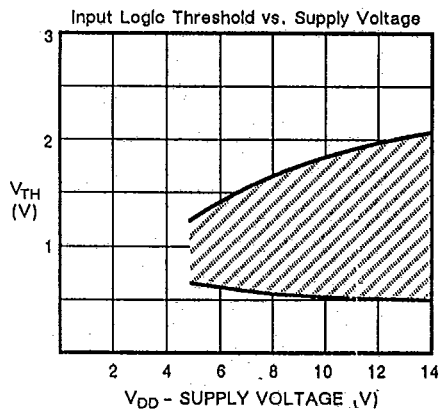
D469



DIE TOPOGRAPHY

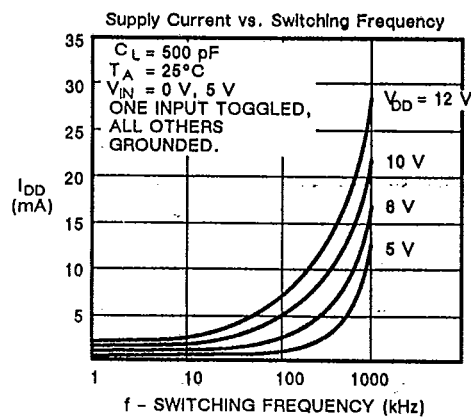
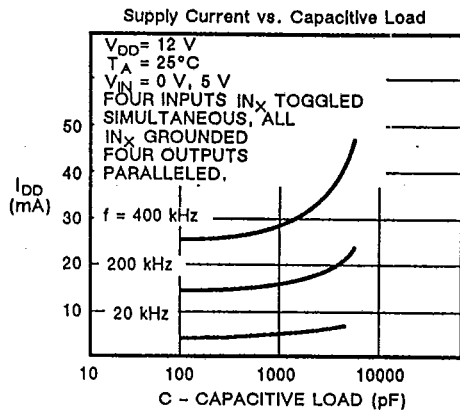
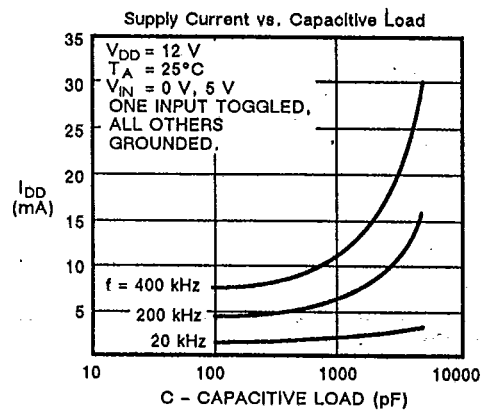
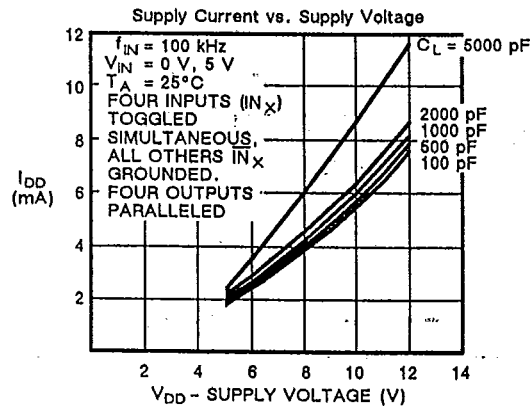
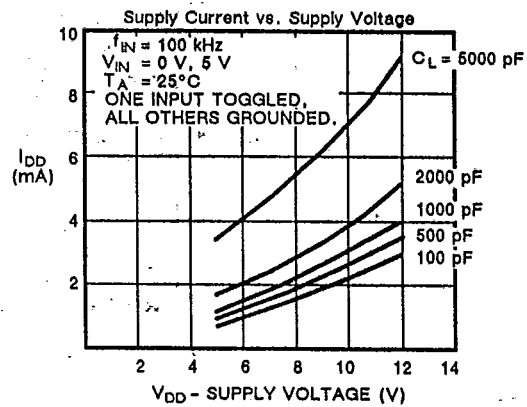
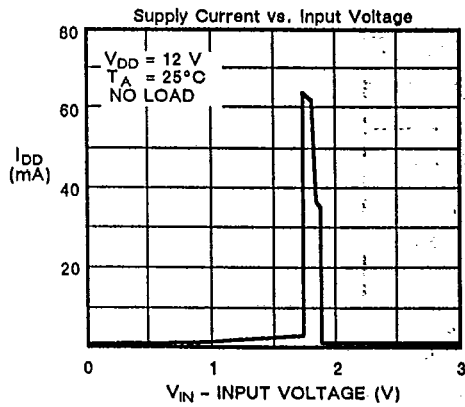


TYPICAL CHARACTERISTICS





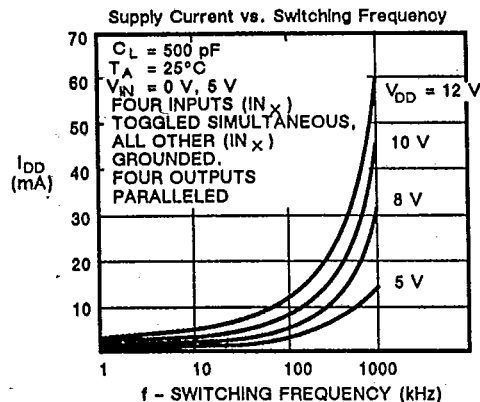
TYPICAL CHARACTERISTICS (Cont'd)



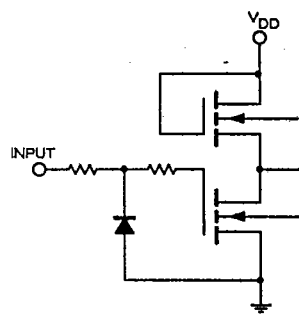
**D469**



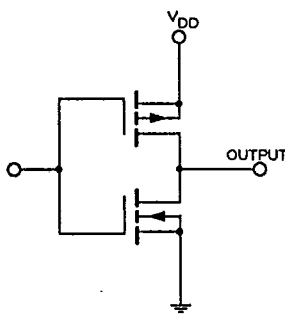
TYPICAL CHARACTERISTICS (Cont'd)



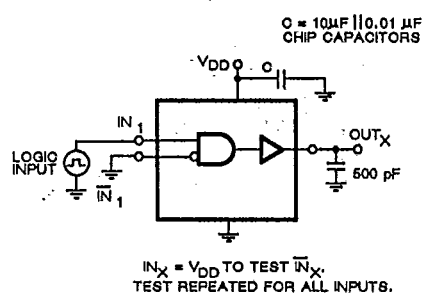
INPUT STRUCTURE



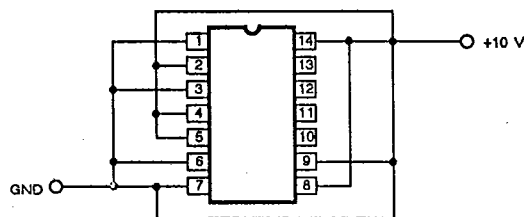
OUTPUT STRUCTURE



SWITCHING TIME TEST CIRCUIT



BURN-IN DIAGRAM



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