

TECHNICAL DATA
DATA SHEET 272, REV. A

6A-Peak Low Side MOSFET Driver
Bipolar/CMOS/DMOS Process

FEATURES:

- CMOS Construction
- Similar to Industry Part Number MIC4420
- Low Output Impedance, 2.5 Ohms
- Latch-Up Protected; Will Withstand > 500 mA Reverse Output Current
- Logic Input Withstands Negative Swing of Up to 5V

MAXIMUM RATINGS

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
Power Dissipation		-	-	1,250	mW
Derating Factors (CerPack)		-	-	10	mW/°C
Storage Temperature		-65	-	+150	°C
Lead Temperature (10sec)		-	-	300	°C
Supply Voltage		-	-	20	Volts
Input Voltage, ($V_S + 0.3V$ to Ground)		-	-	-5.0	Volts
Input Current ($V_{IN} > V_S$)				50	mA

ELECTRICAL CHARACTERISTICS

$T_A = 25^\circ\text{C}$ with $4.5V \leq V_S \leq 18V$ otherwise specified.

Logic 1 Input Voltage	V_{IH}	2.4	1.4	-	Volts
Logic 0 Input Voltage	V_{IL}	-	1.1	0.8	Volts
Input Voltage Range	V_{IN}	-5.0	-	$V_S + 0.3$	Volts
Input Current, ($0V \leq V_{IN} \leq V_S$)	I_{IN}	-10	-	10	μA
High Output Voltage	V_{OH}	V_S -0.025	-	-	Volts
Low Output Voltage	V_{OL}	-	-	0.025	Volts
Output Resistance, Output Low, ($I_{OUT} = 10\text{mA}$, $V_S = 18V$)	R_O	-	1.7	2.8	Ohms
Output Resistance, Output High, ($I_{OUT} = 10\text{mA}$, $V_S = 18V$)	R_O	-	1.5	2.5	Ohms
Peak Output Current $V_S = 18V$	I_{PK}	-	6.0	-	Amps
Latch-Up Protection	I_R	>500	-	-	mA
Rise Time, ($C_L = 2500\text{ pF}$)	t_R	-	12	35	ns
Fall Time, ($C_L = 2500\text{ pF}$)	t_F	-	13	35	ns
Delay Time	t_{d1}	-	18	75	ns
Delay Time	t_{d2}	-	48	75	ns
Power Supply Current, ($V_{IN} = 3.0V$) ($V_{IN} = 0V$)	I_S	-	0.45	1.5	mA
		-	90	150	μA
Operating Input Voltage	V_S	4.5	-	18	Volts

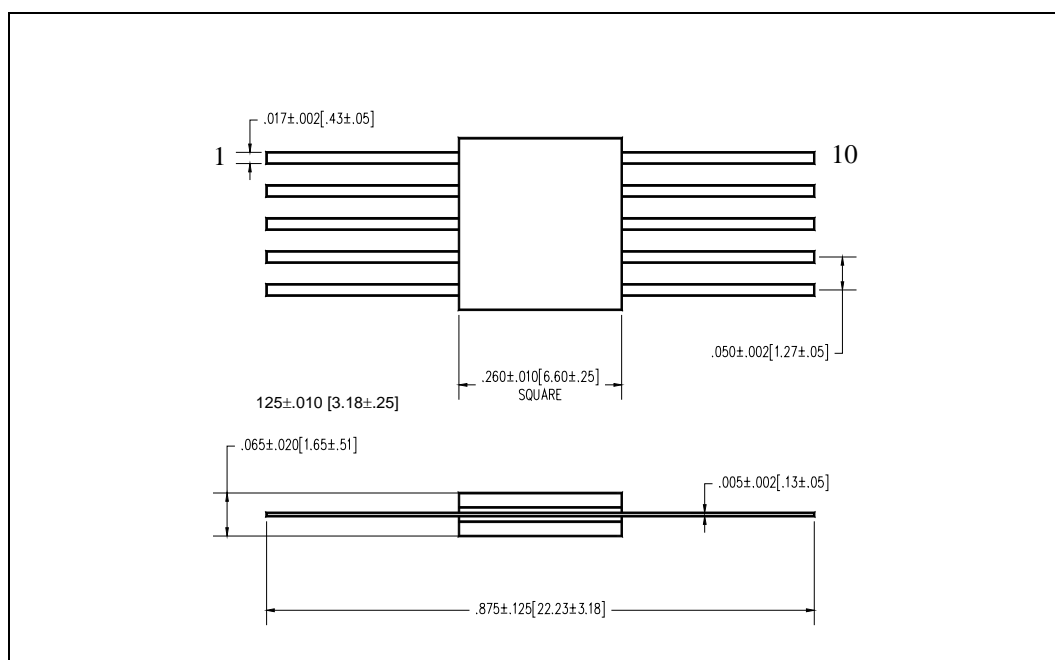
ELECTRICAL CHARACTERISTICS

$T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$ with $4.5V \leq V_S \leq 18V$ otherwise specified.

Logic 1 Input Voltage	V_{IH}	2.4	-	-	Volts
Logic 0 Input Voltage	V_{IL}	-	-	0.8	Volts
Input Voltage Range	V_{IN}	-5.0	-	$V_S + 0.3$	Volts
Input Current, ($0V \leq V_{IN} \leq V_S$)	I_{IN}	-10	-	10	μA
High Output Voltage	V_{OH}	V_S -0.025	-	-	Volts
Low Output Voltage	V_{OL}	-	-	0.025	Volts

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ELECTRICAL CHARACTERISTICS (Continued) $T_A = -55^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ with $4.5\text{V} \leq V_S \leq 18\text{V}$ otherwise specified.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
Output Resistance, Output Low, ($I_{\text{OUT}} = 10\text{mA}$, $V_S = 18\text{V}$)	R_O	-	3.0	5.0	Ohms
Output Resistance, Output High, ($I_{\text{OUT}} = 10\text{mA}$, $V_S = 18\text{V}$)	R_O	-	2.3	5.0	Ohms
Rise Time, ($C_L = 2500\text{ pF}$)	t_R	-	32	60	ns
Fall Time, ($C_L = 2500\text{ pF}$)	t_F	-	34	60	ns
Delay Time	t_{d1}	-	50	100	ns
Delay Time	t_{d2}	-	65	100	ns
Power Supply Current, ($V_{\text{IN}} = 3.0\text{V}$)	I_S	-	0.45	3.0	mA
($V_{\text{IN}} = 0\text{V}$)		-	0.06	0.4	mA
Operating Input Voltage	V_S	4.5	-	18	Volts

MECHANICAL DIMENSIONS: in Inches / mm

CerPack-10
PINOUT TABLE

DEVICE TYPE	Pin-1	Pin-2	Pin-3	Pin-4	Pin-5	Pin-6	Pin-7	Pin-8	Pin-9	Pin-10
MOSFET CERPACK-10	V_S	Input	N/C	Gnd.	N/C	N/C	Gnd.	Output	Output	V_S

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