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°C with 4.5V ≤ V_S ≤ 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 ≤ V_{IN} ≤ 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} = 10mA, V_s = 18V	R_O	-	1.7	2.8	Ohms
Output Resistance, Output High, (I_{OUT} = 10mA, 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 pF)	t_R	-	12	35	ns
Fall Time, (C_L = 2500 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 90	1.5 150	mA µA
Operating Input Voltage	V_S	4.5	-	18	Volts

ELECTRICAL CHARACTERISTICS

T_A = -55°C to +125°C with 4.5V ≤ V_S ≤ 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 ≤ V_{IN} ≤ 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

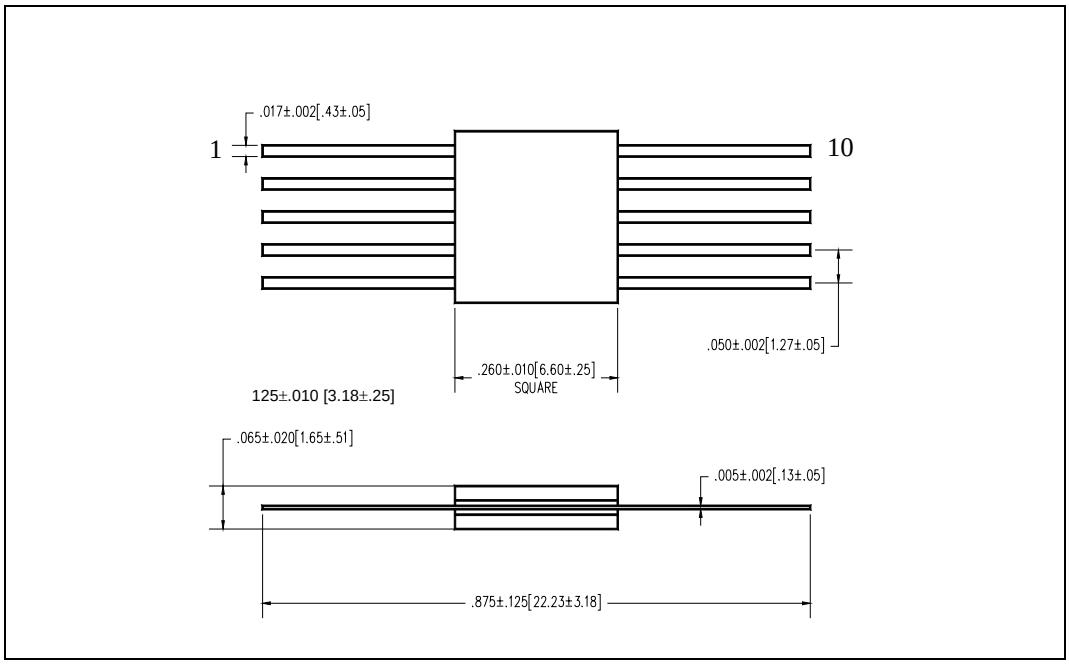
TECHNICAL DATA
DATA SHEET 272, REV. A

ELECTRICAL CHARACTERISTICS (Continued)

T_A = -55°C to +125°C with 4.5V ≤ V_S ≤ 18V otherwise specified.

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

TECHNICAL DATA
DATA SHEET 272, REV. A

DISCLAIMER:

1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).
2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment , and safety equipment) , safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement .
3- In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.

4- In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
5- No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.
6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of Sensitron Semiconductor.
7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.