

TECHNICAL DATA DATA SHEET 784, REV. A

3A-Peak Low Side MOSFET Driver Bipolar/CMOS/DMOS Process

FEATURES:

- CMOS Construction
- Similar to Industry Part Number MIC4424
- Low Output Impedance, 3.5 Ohms
- Latch-Up Protected; Will Withstand > 500mA Reverse Output Current
- Logic Input Withstands Negative Swing of Up to -5V

MAXIMUM RATINGS

RATING	MIN.	TYP.	MAX.	UNITS
Power Dissipation (T _C = 25°C)	-	-	1250	mW
Derating Factors (CerDip)	-	-	12.5	mW/°C
Storage Temperature	-65	-	+150	°C
Lead Temperature (10sec)	-	-	300	°C
Supply Voltage	-	-	22	Volts
Input Voltage, (V _S + 0.3V to Ground –5.0)	-	-	-5.0	Volts
Input Current (V _{IN} >V _S)	-1.0	-	1.0	mA

ELECTRICAL CHARACTERISTICS

 $T_{\Delta} = 25^{\circ}C$ with $4.5V \le V_{S} \le 18V$ otherwise specified.

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RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS		
Logic 1 Input Voltage	V_{IH}	2.4	-	-	Volts		
Logic 0 Input Voltage	V_{IL}	-	-	0.8	Volts		
Input Voltage Range	V_{IN}	0	-	Vs	Volts		
Input Current, $(0V \le V_{IN} \le V_{S})$	I _{IN}	-1.0	-	1.0	μΑ		
High Output Voltage	V _{OH}	V _S -0.025	-	-	Volts		
Low Output Voltage	V_{OL}	-	-	0.025	Volts		
Output Resistance, Output High, (I _{OUT} = 10mA, V _s = 18V)	Ro	-	2.8	5.0	Ohms		
Output Resistance, Output Low, $(I_{OUT} = 10 \text{mA}, V_s = 18 \text{V})$	Ro	-	3.5	5.0	Ohms		
Peak Output Current V _S = 18V	I _{PK}	-	3.0	-	Amps		
Latch-Up Protection; withstand reverse current.	I_{R}	>500	-	-	mA		
Rise Time, $(C_L = 1800 pF)$	t _R	-	23	35	ns		
Fall Time, (C _L = 1800 pF)	t _F	-	25	35	ns		
Delay Time, Rise (C _L = 1800 pF)	t _{d1}	-	33	75	ns		
Delay Time, Fall (C _L = 1800 pF)	t _{d2}	-	38	75	ns		
Power Supply Current, (V _{IN} = 3.0V)	I _S	-	1.5	2.5	mA		
$(V_{IN} = 0V)$		-	0.15	0.25	mA		
Operating Input Voltage	Vs	4.5	-	18	Volts		

ELECTRICAL CHARACTERISTICS

 $\rm T_{_A}$ = -55°C to +125°C with 4.5V \leq Vs \leq 18V otherwise specified.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
Logic 1 Input Voltage	V_{IH}	2.4	ı	1	Volts
Logic 0 Input Voltage	V_{IL}	-		0.8	Volts
Input Voltage Range	V_{IN}	0	ı	Vs	Volts
Input Current, $(0V \le V_{IN} \le V_{S})$	I _{IN}	-10		10	μΑ
High Output Voltage	V _{OH}	Vs	-	-	Volts
		-0.025			
Low Output Voltage	V _{OL}	-	-	0.025	Volts

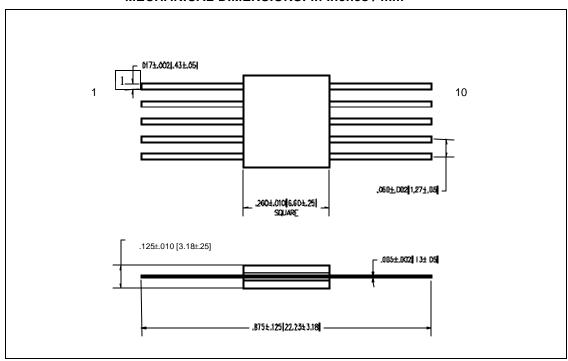
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ELECTRICAL CHARACTERISTICS (Continued)

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

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
Output Resistance, Output High, V _{IN} = 0.8	Ro	-	3.7	8.0	Ohms
$(I_{OUT} = 10 \text{mA}, V_s = 18 \text{V})$					
Output Resistance, Output Low, V _{IN} = 2.4	Ro	-	4.3	8.0	Ohms
$(I_{OUT} = 10 \text{mA}, V_s = 18 \text{V})$					
Rise Time, $(C_L = 1800 pF)$	t_R	1	28	60	ns
Fall Time, $(C_L = 1800 pF)$	t _F	-	32	60	ns
Delay Time, Rise (C _L = 1800 pF)	t _{d1}	-	32	100	ns
Delay Time, Fall (C _L = 1800 pF)	t _{d2}	•	38	100	ns
Power Supply Current, (V _{IN} = 3.0V)	I _S	-	2.0	3.5	mA
$(V_{IN} = 0V)$			0.20	0.3	
Operating Input Voltage	Vs	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 DRIVER	N/C	Input A	Gnd.	Input B	N/C	N/C	Output B	Vs	Output A	N/C
CERPACK-10										



TECHNICAL DATA

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