

**TECHNICAL DATA**  
**DATA SHEET NUMBER 583, REV. -**

**QUADRUPLE HALF-H DRIVER**

**FEATURES:**

- 600 mA Output Current Capability, Per Driver
- Pulsed Current 1.2 A Per Driver
- Output Clamp Diodes for Inductive Transient Suppression
- Wide Supply Voltage Range; 4.5V to 36V
- Functional Replacement for SGS L293D

**MAXIMUM RATINGS** ALL RATINGS ARE OVER A FREE-AIR TEMPERATURE RANGE, UNLESS OTHERWISE SPECIFIED.

RATING	MAX.	UNITS
Logic Supply Voltage Range, $V_{CC1}$ (see Note 1)	36	V
Output Supply Voltage Range, $V_{CC2}$	36	V
Input Voltage Range, $V_I$	7.0	V
Output Voltage Range, $V_O$	-3.0 to $V_{CC2}+3.0$	V
Peak Output Current (non-repetitive, $t \leq 100 \mu s$ )	$\pm 1.2$	A
Continuous Output Current, $I_O$	$\pm 600$	mA
Continuous Total Dissipation at (or below) 25° C Free Air Temperature (2, 3)	2075	mW
Continuous Total Dissipation at 80° C Case Temperature (3)	5000	mW
Operating Case or Virtual Junction Temperature Range, $T_J$	-40 to +150	°C
Storage Temperature Range, $T_{stg}$	-65 to +150	°C
Lead Temperature 1.6 mm (1/16 inch) From Case for 10 Seconds	260	°C

- Notes:**
- 1- All voltage values are with respect to the network ground terminal.
  - 2- For operation above 25°C free air temperature, derate linearly at the rate of 16.6mW/°C.
  - 3- For operation above 25°C case temperature, derate linearly at the rate of 71.4mW/°C. Due to variations in individual device electrical characteristics and thermal resistance, the built in thermal overload protection may be activated at power levels slightly above or below the rated dissipation.

**RECOMMENDED OPERATING CONDITIONS**

	MIN.	MAX.	UNIT
Logic Supply Voltage, $V_{CC1}$	4.5	7.0	V
Output Supply Voltage, $V_{CC2}$	$V_{CC1}$	36	V
High Level Input Voltage, $V_{IH}$	$V_{CC1} \leq 7.0V$ $V_{CC1} \geq 7.0V$	2.3 7.0	$V_{CC1}$ V
Low Level Input Voltage, $V_{IL}$	-0.3*	1.5	V
Operating Free Air Temperature, $T_A$	0	70	°C

\*The algebraic conversion, in which the least positive (most negative) value is designated minimum, is used in this data sheet for logic voltage levels.

## SENSITRON

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## ELECTRICAL CHARACTERISTICS

$V_{CC1} = 5V, V_{CC2} = 24V, T_A = 25^{\circ}C$

CHARACTERISTIC		CONDITIONS	MIN.	TYP.	MAX.	UNITS
High level Output Voltage ( $V_{OH}$ )		$I_{OH} = -0.6A$	$V_{CC2}-1.8$	$V_{CC2}-1.4$	-	V
Low level Output Voltage ( $V_{OL}$ )		$I_{OL} = -0.6A$	-	1.2	1.8	V
High level Output Clamp Voltage ( $V_{OKH}$ )		$I_{OK} = -0.6A$	-	$V_{CC2}+1.3$	-	V
Low level Output Clamp Voltage ( $V_{OKL}$ )		$I_{OK} = -0.6A$	-	1.3	-	V
High Level Input Current ( $I_{IH}$ )	A	$V_I = 7.0V$	-	0.2	100	$\mu A$
	EN			0.2	$\pm 10$	
Low Level Input Current ( $I_{II}$ )	A	$V_I = 0V$	-	-3	-10	$\mu A$
	EN			-2	-100	
Logic Supply Current ( $I_{CC1}$ )	$I_O = 0A$	All outputs @ High Level		13	22	mA
		All outputs @ Low Level	-	35	60	
		All outputs @ High Imped.		8.0	24	
Output Supply Current ( $I_{CC2}$ )	$I_O = 0A$	All outputs @ High Level		14	24	mA
		All outputs @ Low Level	-	2.0	6.0	
		All outputs @ High Imped.		2.0	4.0	

## SWITCHING CHARACTERISTICS

$V_{CC1} = 5V, V_{CC2} = 24V, T_A = 25^{\circ}C$

CHARACTERISTIC	CONDITION	MIN.	TYP.	MAX.	UNIT
Propagation Delay Time, L-H Level Output from. A Input ( $t_{PLH}$ )	$C_L = 30 \text{ pF}$	-	800	-	ns
Propagation Delay Time, H-L Level Output from. A Input ( $t_{PHL}$ )		-	400	-	ns
Transition Time, L-H Level Output ( $t_{TLH}$ )		-	300	-	ns
Transition Time, H-L Level Output ( $t_{THL}$ )		-	300	-	ns

**TECHNICAL DATA**

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