

**51992**

**CURRENT DRIVER  
DSCC DWG #5962-87617  
(Replacement for DH0006)**

**Mii**

**HYBRID MICROELECTRONICS  
PRODUCTS DIVISION**

**Features:**

- Operation from a Single +10V to +45V Power Supply
- Low Standby Power Dissipation of only 35mW for 28V Power Supply
- 1.5A, 50ms on, 1 sec off, Pulse Capability
- Meets MIL-PRF-38534 Class H Requirements
- Environmentally Screened per MIL-STD-883

**Applications:**

- Military / High Reliability Systems
- Aircraft Engine Environment
- Controls – High Current
- Pulse Applications
- Lamp Driver

**DESCRIPTION**

The 51992 is a high voltage current driver with DTL compatible TTL logic levels and drive a load up to 400 mA at 28V. Should additional gating be required, AND inputs are provided along with an Expander connection. The addition of an external capacitor provides control of the rise and fall times of the output in order to decrease cold lamp surges or to minimize electromagnetic interference if long lines are driven. Device can be gated On and Off at normal inputs or at pin 8. Since one side of the load is normally grounded there is less likelihood of false turn-on due to an inadvertent short in the drive line.

Meets the requirements of SMD 5962-87617.

**ABSOLUTE MAXIMUM RATINGS**

Peak Power Supply Voltage (for less than 0.1s) .....	60V
Continuous Supply Voltage .....	45V
Input Voltage .....	5.5V
Input Expander Current .....	5.0mA
Peak Output Current (50ms On 1 sec. Off).....	1.5A
Continuous Output Current .....	0.4A
Operating Temperature .....	-55°C to +125°C
Storage Temperature .....	-65°C to +150°C

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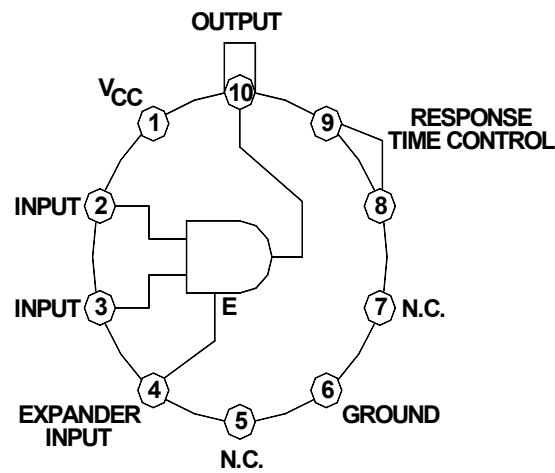
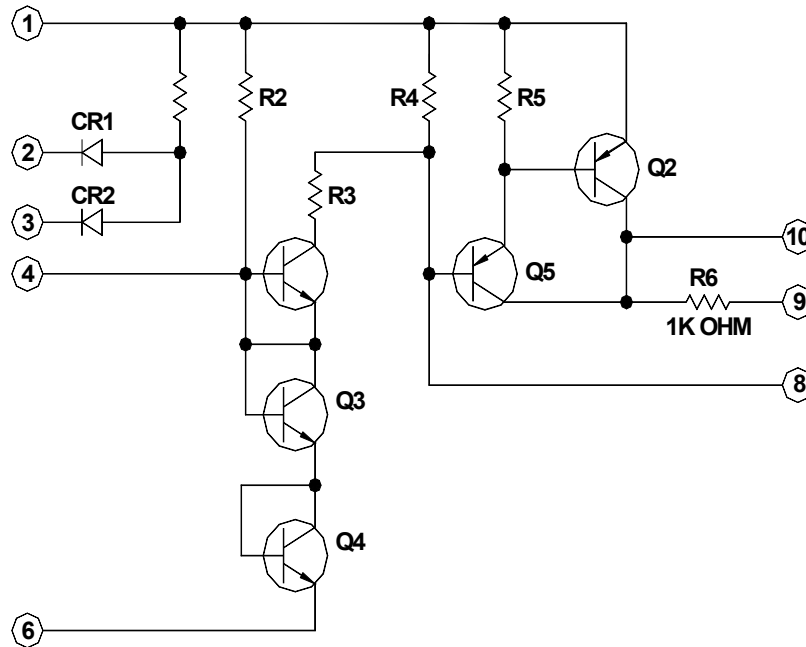
**ELECTRICAL CHARACTERISTICS**

(-55°C ≤ Ta ≤ +125°C)

PARAMETER	CONDITIONS	MIN	MAX	UNITS
Logical "1" Input Voltage	$10V \leq V_{cc} \leq 45V$	2.0		V
Logical "0" Input Voltage	$10V \leq V_{cc} \leq 45V$		0.8	V
Logical "1" Output Voltage	$V_{cc} = 10V, V_{in} = 2V, I_{out} = 150mA$ $V_{cc} = 28V, V_{in} = 2V, R_L = 82\Omega$	8.8 26.5		V V
Logical "0" Output Voltage	$V_{cc} = 45V, V_{in} = 0.8, R_L = 1K\Omega$		10	mV
Logical "1" Input Current	$V_{cc} = 45V, V_{in} = 2.4V$ $V_{cc} = 45V, V_{in} = 5.5V$		5.0 100	$\mu A$ $\mu A$
Logical "0" Input Current	$V_{cc} = 45V, V_{in} = 0.4V$	-1.0		mA
"Off" Power Supply Current	$V_{cc} = 45V, V_{in} = 0.8V$		2.0	mA
"On" Power Supply Current	$V_{cc} = 45V, V_{in} = 2V, I_{out} = 0mA$		8.0	mA
Rise Time	$V_{cc} = 28V, V_{in} = 5V, R_L = 82\Omega$		300	ns
Fall Time	$V_{cc} = 28V, V_{in} = 5V, R_L = 82\Omega$		1.5	$\mu s$
Turn on Time	$V_{cc} = 28V, V_{in} = 5V, R_L = 82\Omega$		1.0	$\mu s$
Turn off Time	$V_{cc} = 28V, V_{in} = 5V, R_L = 82\Omega$		5.2	$\mu s$

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Schematic and Connection Diagrams



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