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LEVEL-SHIFTED GAS DISCHARGE DISPLAY DIGIT DRIVERS

DI-500B

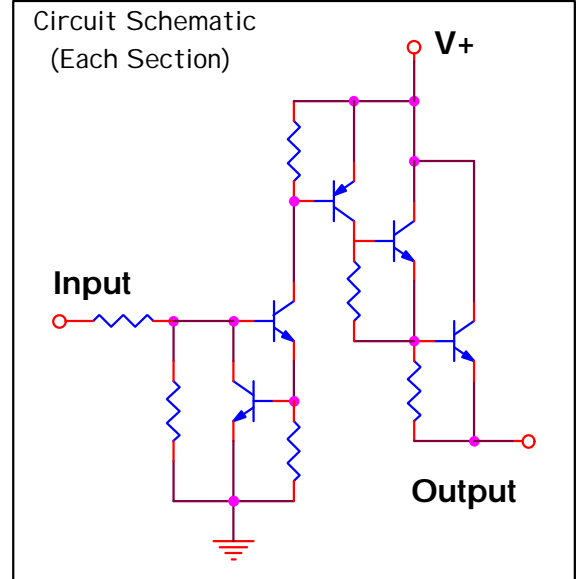
DI-502B

General Description:

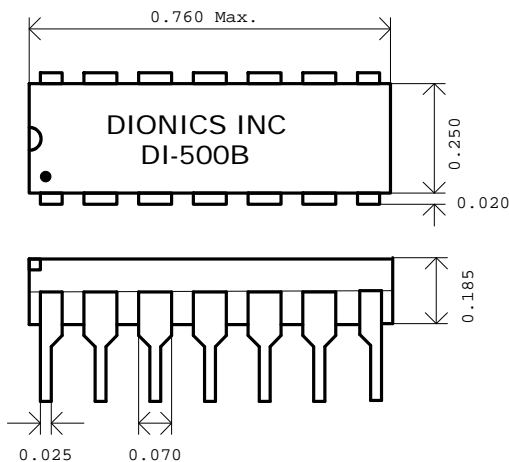
The DIONICS DI-500B and DI-502B circuits are designed for interfacing between MOS or TTL circuitry and gas discharge display panels. Each section of these devices is made up of a switched constant current level shifter-capable of high voltage operation-and a pnp-npn driver transistor pair. The constant current operation of the level shifter stage results in low power dissipation. Input circuitry is suitable for open drain PMOS, CMOS, open-collector or standard TTL.

Features:

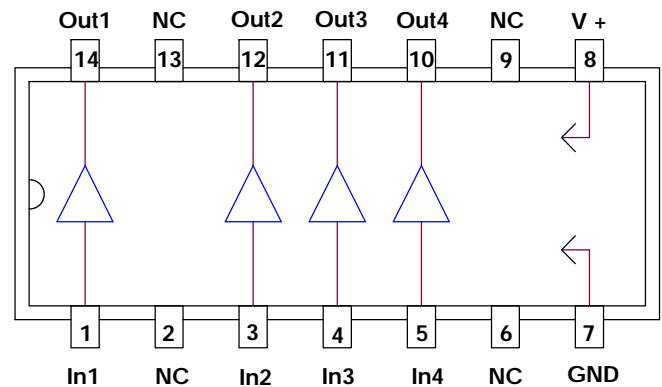
- ✓ Level Shift Capability: 125V For DI-502B
200V For DI-500B
- ✓ MOS and TTL Compatibility
- ✓ Pin For Pin Replacements For Sprague UDN-6144A
- ✓ Low Power Dissipation
- ✓ Reliable Dielectric Isolation Process



Package Layout:



Pin Connections



Absolute Maximum Rating (Ta = 25 °C)

Characteristic	Symbol	Notes	Limits	Units	
Supply Voltage	DI-500B	V +	Measured With Respect to GND	200	V
	DI-502B	V +	Measured With Respect to GND	125	V
Input Voltage	V _{in}	Measured With Respect to GND	35	V	
Output Voltage	V _{out}	Measured With Respect to V + Terminal	90	V	
Output Current	I _{out}		40	mA	
Power Dissipation	DI-500B	P _D	Derate at 6 mW/ °C Above 25 °C Ambient	600	mW
	DI-502B	P _D	Derate at 6 mW/ °C Above 25 °C Ambient	600	mW
Storage Temperature	T _s		-55 to +125	°C	
Operating Temperature	T _o		0 to +70	°C	

Electrical Characteristics (Ta = 25 °C)

Parameter	Symbol	Notes	Conditions	Typ.	Max.	Units
Output Saturation Voltage	V _{out} (SAT)	V + = 180V (DI-500B); V + = 100V (DI-502B); Measured With Respect to V+ Terminal.	I _o = 25mA; V _i = 2.4V	3	10	V
Output Leakage Current	I _{out} (OFF)	V + = 180V (DI-500B); V + = 100V (DI-502B).	V _o = 90V; V _i = 0.4V	0.1	10	μA
Input Current	I _{in} (ON)		V _i = 2.4V	340	400	μA
Supply Current	I+	V + = 180V (DI-500B); V + = 100V (DI-502B); One Input at 3.5V, Others at 0.4V.	V _i = 2.4 V; I _o = 0	0.5	2.0	mA

Typical Application:

