DIONICS, INC.
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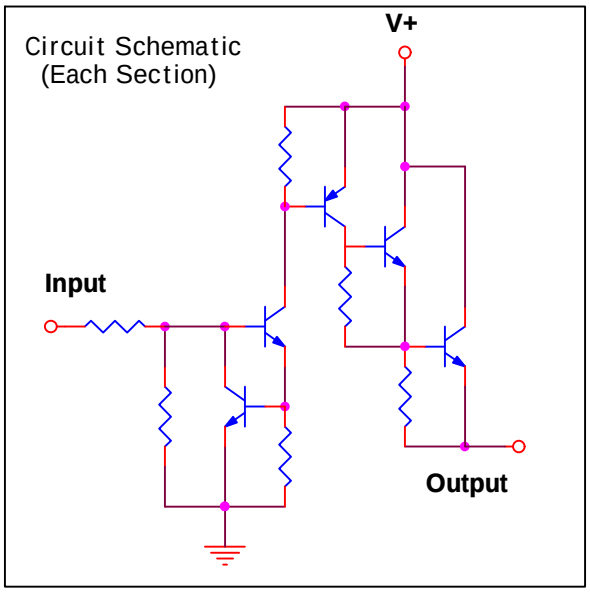
LEVEL-SHIFTED GAS DISCHARGE DISPLAY DIGIT DRIVERS

DI-507B DI-512B

General Description:

The DIONICS DI-507B and DI-512B series 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.

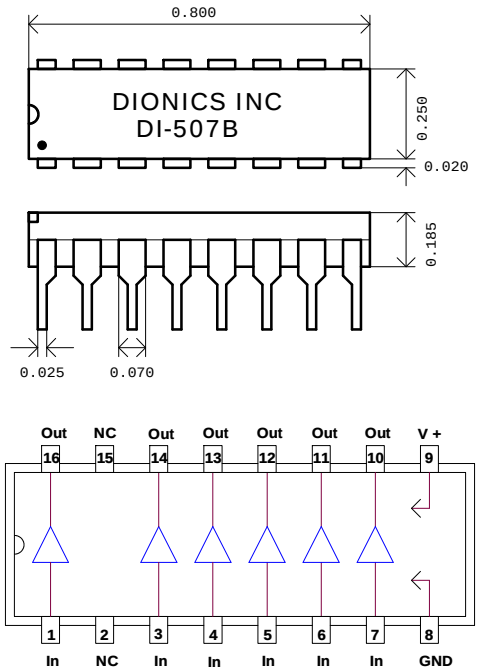


Features:

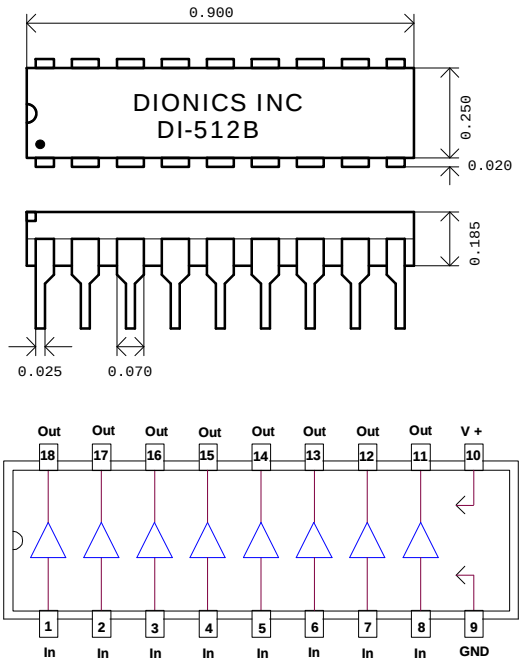
- ✓ 125V Level Shift Capability
- ✓ MOS and TTL Compatibility
- ✓ 6- and 8-line Versions
- ✓ Low Power Dissipation
- ✓ Reliable Dielectric Isolation Process
- ✓ Pin For Pin Replacement for
  Sprague UDN-6164A, UDN-6184A
- ✓ Functional Replacement For SIGNETICS 585 Series

Package Layout:

DI-507B



DI-512B



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Absolute Maximum Rating (Ta = 25 ^{0}C)

Characteristic	Symbol	Notes	Limits	Units
Supply Voltage	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-512B	P_D	Derate at 8 mW/ ^{0}C Above 25^{0}C Ambient	800	mW
DI-507B	P_D	Derate at 6 mW/ ^{0}C Above 25^{0}C Ambient	600	mW
Storage Temperature	T_s		-55 to +125	^{0}C
Operating Temperature	T_o		0 to +70	^{0}C

Electrical Characteristics (Ta = 25 ^{0}C)

Parameter	Symbol	Notes	Conditions	Typ.	Max.	Units
Output Saturation Voltage	V_{out} (SAT)	V + = 100V; Measured With Respect to V+ Terminal	I_o = 25mA; V_i = 2.4V	3	10	V
Output Leakage Current	I_{out} (OFF)	V + = 180V	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+	One Input at 2.4V, Others at 0.4V	V+ = 100V; V_i = 2.4 V; I_o = 0	0.5	1.5	mA