

**MSL917**

OKI SEMICONDUCTOR GROUP

**8-BIT PARALLEL-IN PARALLEL-OUT**

T-52-13-09

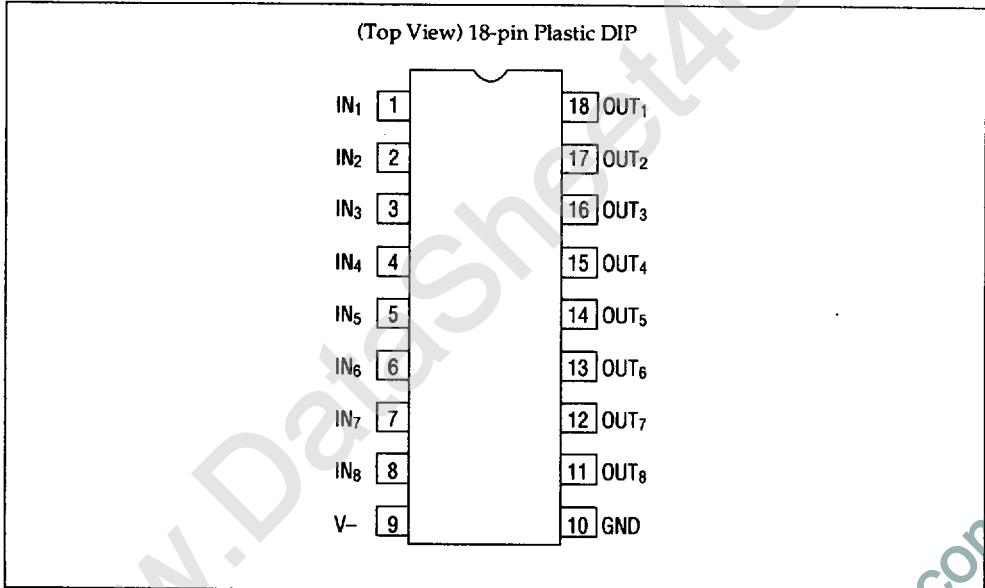
**GENERAL DESCRIPTION**

The MSL917 is a high voltage vacuum fluorescent display tube driver, which uses negative voltage and contains eight circuits. Each output does not contain a pull-down resistor, hence it should be connected to an external resistor (about 150k $\Omega$ )

Input may be driven directly by the TTL or CMOS. The vacuum fluorescent display tube driver may also be used as a high voltage and current driver.

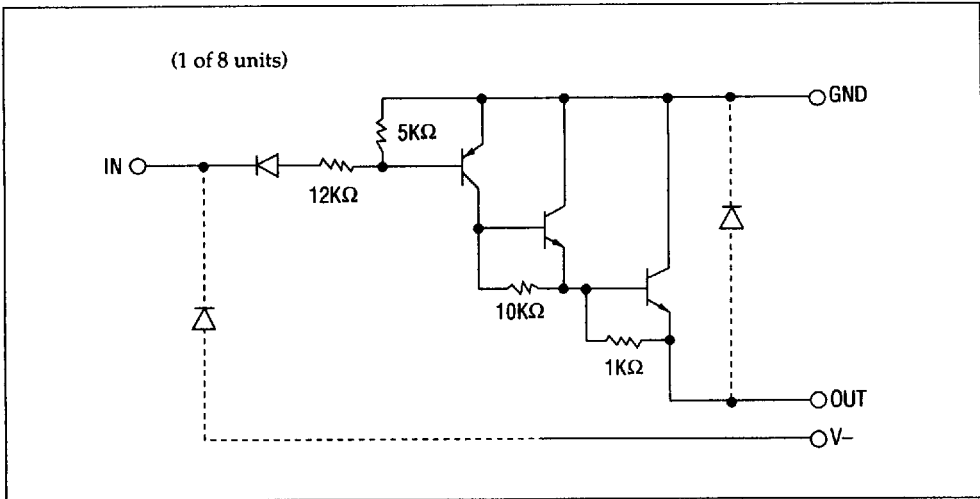
- 18-pin Plastic DIP (DIP 18-P-300)

**PIN CONFIGURATION**



## CIRCUIT CONFIGURATION

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## ELECTRICAL CHARACTERISTICS

## • Absolute Maximum Ratings

Parameter	Symbol	Condition	Limits	Unit
Supply voltage	V-	T <sub>a</sub> =25°C	GND +0.3 ~ GND -85	V
Input voltage	V <sub>i</sub>	T <sub>a</sub> =25°C	GND +0.5 ~ GND -10	V
Output voltage	V <sub>o</sub>	T <sub>a</sub> =25°C	GND +0.3 ~ GND -85	V
Output current	I <sub>o</sub>	T <sub>a</sub> =25°C, only one circuit ON	0 ~ -100	mA
Storage temperature	T <sub>stg</sub>	-	-55 ~ +150	°C

## • Recommended Operating Conditions

Parameter	Symbol	Condition	Limits	Unit
Supply voltage	V-	-	GND -20 ~ GND -80	V
Input voltage	V <sub>i</sub>	-	GND ~ GND -7	V
Output current	I <sub>o</sub>	Only one circuit ON*	0 ~ -90	mA
		Per circuit when all circuits are ON*	0 ~ -11	mA
		Total output current*	0 ~ -90	mA
Operating temperature	T <sub>op</sub>	-	-30 ~ +75	°C

\* Duty: 50% max.

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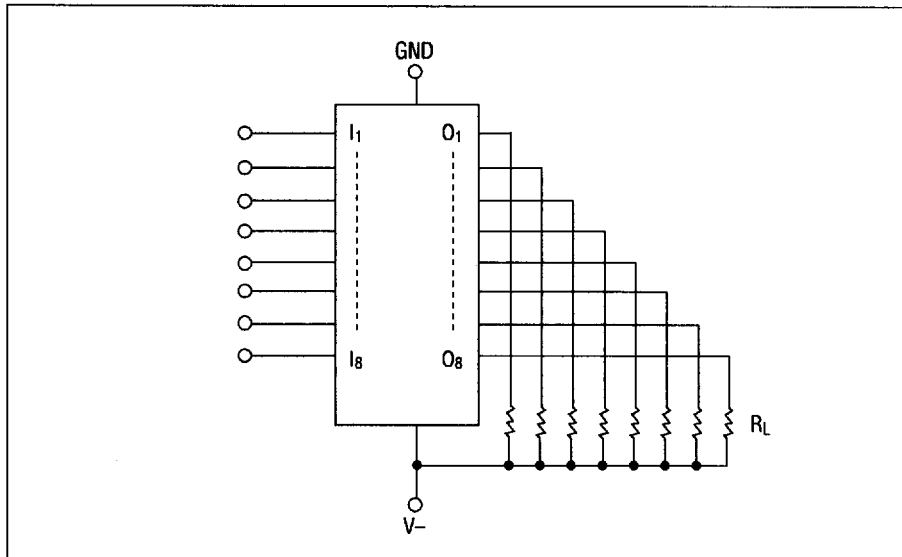
- DC Characteristics

(Ta = -30 ~ +75°C, TYP: Ta = 25°C)

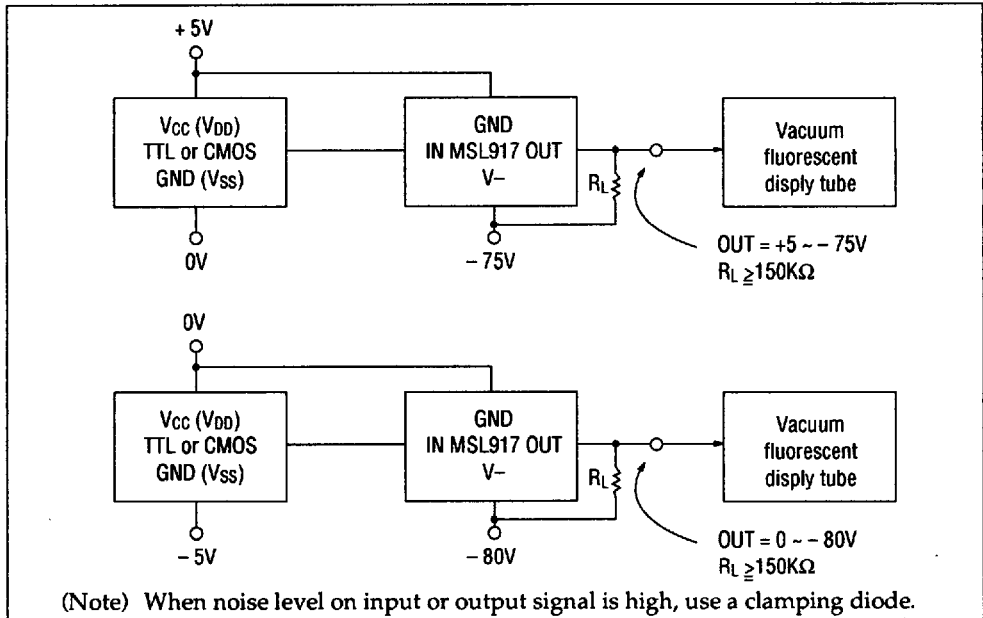
Parameter	Symbol	Condition				Specification			Unit
		V- (V)	Vi (V)	Io (mA)	RL (Ω)	MIN	TYP	MAX	
High input voltage	V <sub>IH</sub>	-80	-	-	-	-	-	-1.5	V
Low input voltage	V <sub>IL</sub>	-80	-	-	-	-4	-	-	V
High input current	I <sub>IH</sub>	-80	-1.5	-	-	-	-70	-280	μA
Low input current	I <sub>IL1</sub>	-80	-4	-	-	-	-0.23	-1.2	mA
	I <sub>IL2</sub>	-80	-7	-	-	-	-0.58	-2.6	mA
High output voltage	V <sub>OH</sub>	-80	-4	-90	-	-	-2.0	-3.0	V
Low output voltage	V <sub>OL</sub>	-80	-1.5	0	150K	-75	-79	-	V
Supply current	I <sub>CC OFF</sub>	-80	ALL INPUTS -1.5	-	150K	-	0.7	1.3	mA
	I <sub>CC ON</sub>	-80	ALL INPUTS -4	-	150K	-	8	14	mA

\*1 RL connection method

**RL CONNECTION METHOD**



## APPLICATION NOTE



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