

**MSL915**

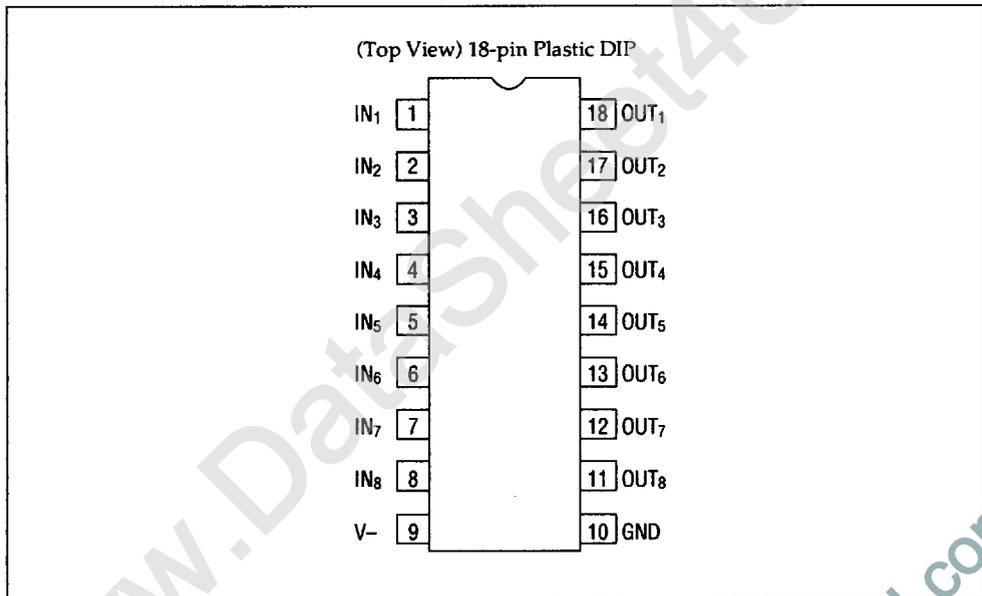
OKI SEMICONDUCTOR GROUP

**8-BIT PARALLEL-IN PARALLEL-OUT****GENERAL DESCRIPTION**

The MSL915 is a high voltage vacuum fluorescent display tube driver, which uses negative voltage and contains eight circuits. Each output contains a pull-down resistor, which allows the driver to directly drive the vacuum fluorescent display tube.

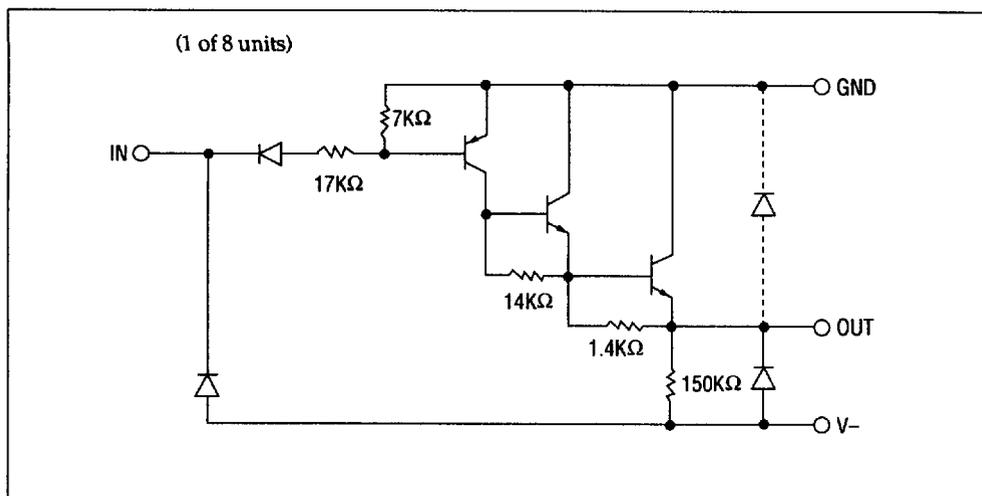
Input may be driven directly by the TTL or CMOS.

- 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-	Ta=25°C	GND +0.3 ~ GND -65	V
Input voltage	Vi	Ta=25°C	GND +0.5 ~ GND -10	V
Output voltage	Vo	Ta=25°C	GND +0.3 ~ V- -0.5	V
Output current	Io	Ta=25°C, only one circuit ON	+0.9 ~ -45	mA
Storage temperature	Tstg	-	-55 ~ +150	°C

## • Recommended Operating Conditions

Parameter	Symbol	Condition	Limits	Unit
Supply voltage	V-	-	GND -20 ~ GND -60	V
Input voltage	Vi	-	GND - GND -7	V
Output current	Io	Only one circuit ON*	+0.8 ~ -40	mA
		Per circuit when all circuits are ON*	+0.8 ~ -5	mA
		Total output current*	+0.8 x 8 ~ -40	mA
Operating temperature	Top	-	-30 ~ +75	°C

\* Duty: 50% max.

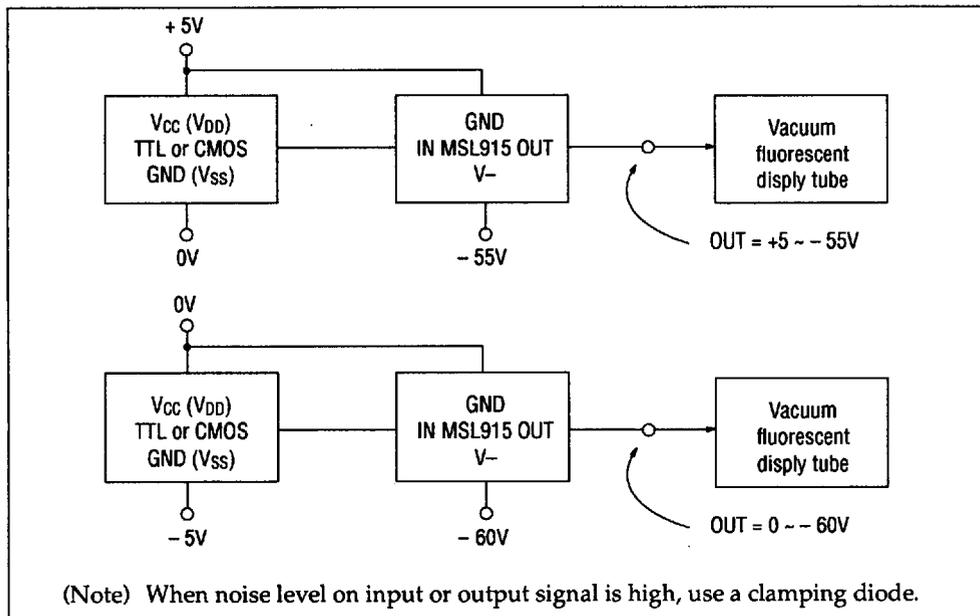
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## • DC Characteristics

(Ta = -30 ~ +75°C, TYP: Ta = 25°C)

Parameter	Symbol	Condition			Specification			Unit
		V (V)	V <sub>I</sub> (V)	I <sub>O</sub> (mA)	MIN	TYP	MAX	
High input voltage	V <sub>IH</sub>	-60	-	-	-	-	-1.5	V
Low input voltage	V <sub>IL</sub>	-60	-	-	-4	-	-	V
High input current	I <sub>IH</sub>	-60	-1.5	-	-	-70	-280	μA
Low input current	I <sub>IL1</sub>	-60	-4	-	-	-0.23	-1.2	mA
	I <sub>IL2</sub>	-60	-7	-	-	-0.58	-2.6	mA
High output voltage	V <sub>OH</sub>	-60	-4	-40	-	-1.5	-3	V
Low output voltage	V <sub>OL</sub>	-60	-1.5	0	-55	-59	-	V
Supply current	I <sub>CC OFF</sub>	-60	ALL INPUTS -1.5	0	-	0.7	1.3	mA
	I <sub>CC ON</sub>	-60	ALL INPUTS -4	0	-	6	12	mA
Pull-down resistor	R <sub>PD</sub>	-60	ALL INPUTS 0	V <sub>O</sub> = -3V	60	150	270	kΩ

## APPLICATION NOTE



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