

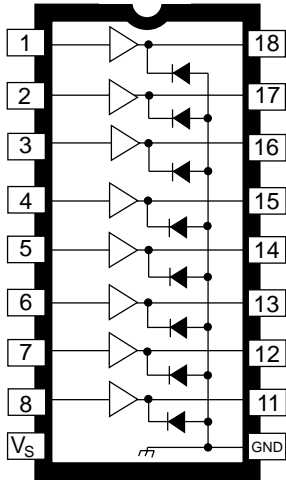
8-CHANNEL SOURCE DRIVER

Recommended for applications requiring separate logic and load grounds, load supply voltages to 30 V, and load currents to 250 mA, the UDN2985A source driver is used as an interface between standard low-power digital logic and LEDs, relays, and solenoids. The outputs feature saturated transistors for low collector-emitter saturation voltages.

The UDN2985A driver is for use with 5 V logic systems—TTL, Schottky TTL, DTL, and CMOS. This device has a minimum output breakdown rating of 30 V with a minimum output sustaining voltage of 15 V. The output is switched ON by an active-high input level.

Under normal operating conditions, this device can source up to 120 mA for each of the eight outputs at an ambient temperature of 75°C and a supply voltage of 15 V. It incorporates input current-limiting resistors and output transient-suppression diodes.

The UDN2985A source driver is supplied in an 18-pin dual in-line package. All inputs are on one side of the package, output pins on the other, to simplify printed wiring board layout.



Dwg. No. A-10,243

ABSOLUTE MAXIMUM RATINGS at $T_A = 25^\circ\text{C}$

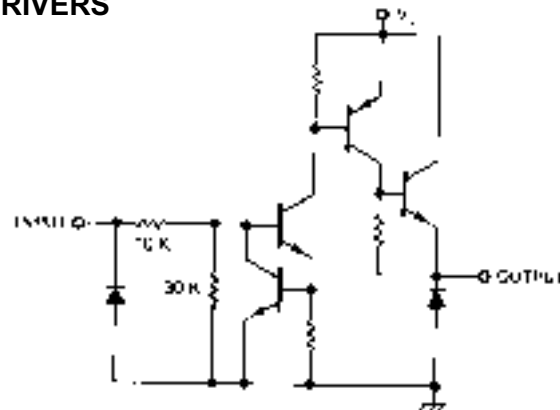
Driver Supply Voltage, V_S	30 V
Continuous Output Current, I_{OUT}	-250 mA
Input Voltage, V_{IN}	20 V
Package Power Dissipation, P_D	2.2 W*
Operating Temperature Range, T_A	-20°C to +85°C
Storage Temperature Range, T_S	-55°C to +150°C

*Derate at the rate of 18 mW/°C above $T_A = 25^\circ\text{C}$.

FEATURES

- TTL, DTL, or CMOS Compatible Inputs
- 250 mA Output Source Current Capability
- Output Transient-Suppression Diodes
- 30 V Minimum Output Breakdown Voltage
- Low Output-Saturation Voltage

PARTIAL SCHEMATIC DIAGRAM 1 of 8 DRIVERS



Dwg. No. DS-1013

Always order by complete part number: **UDN2985A**.

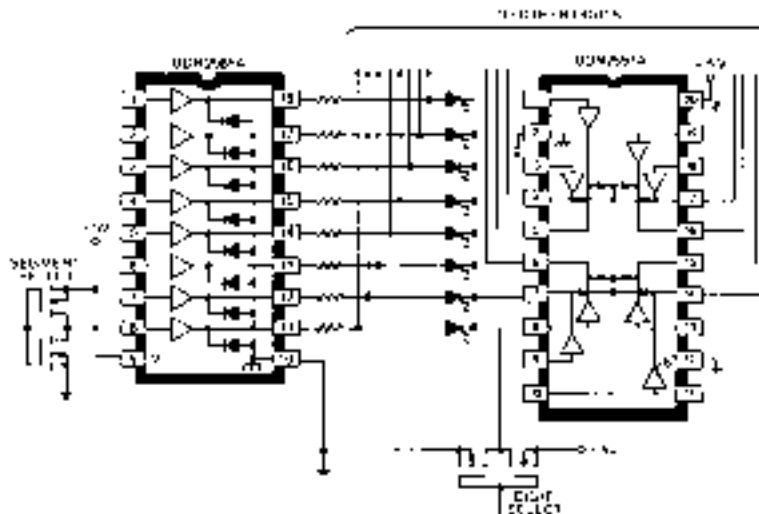
2985 8-CHANNEL SOURCE DRIVER

ELECTRICAL CHARACTERISTICS at $T_A = 25^\circ\text{C}$, $V_S = 30\text{ V}$ (unless otherwise noted).

Characteristics	Symbol	Test Conditions	Limits			Units
			Min.	Typ.	Max.	
Output Leakage Current	I_{CEX}	$V_{IN} = 0.4\text{ V}$, $V_{OUT} = 0\text{ V}$	—	<-1.0	-100	μA
Output Sustaining Voltage	$V_{CE(sus)}$	$I_{OUT} = -120\text{ mA}$, $L = 3\text{ mH}$	15	—	—	V
Output Saturation Voltage	$V_{CE(SAT)}$	$V_{IN} = 2.4\text{ V}$, $I_{OUT} = -60\text{ mA}$	—	0.8	1.1	V
		$V_{IN} = 2.4\text{ V}$, $I_{OUT} = -120\text{ mA}$	—	0.9	1.2	V
Input Current Voltage	$I_{IN(ON)}$	$V_{IN} = 2.4\text{ V}$	—	90	225	μA
		$V_{IN} = 5.0\text{ V}$	—	280	650	μA
	$I_{IN(OFF)}$	$V_{IN} = 0.4\text{ V}$	—	10	15	μA
Supply Current (outputs open)	I_S	$V_S = 30\text{ V}$, $V_{IN} = 2.4\text{ V}$	—	10	15	mA
Clamp Diode Leakage Current	I_R	$V_R = 30\text{ V}$, $T_A = 70^\circ\text{C}$	—	<1.0	50	μA
Clamp Diode Forward Voltage	V_F	$I_F = 120\text{ mA}$	—	1.1	2.0	V
Turn-On Delay	t_{ON}		—	0.5	1.0	μs
Turn-Off Delay	t_{OFF}		—	5.0	10	μs

NOTE: Negative current is defined as coming out of (sourcing) the specified device pin.

COMMON-CATHODE LED DRIVER



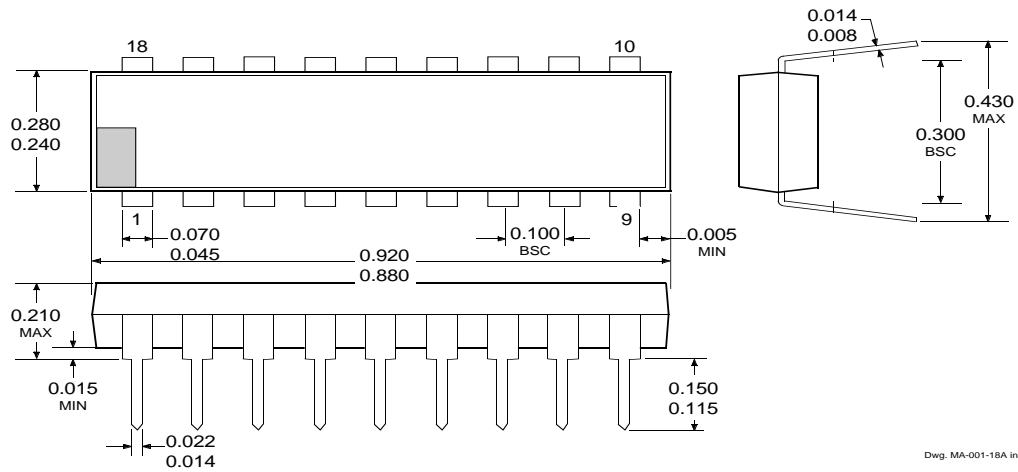
Dwg. No. DS-1014



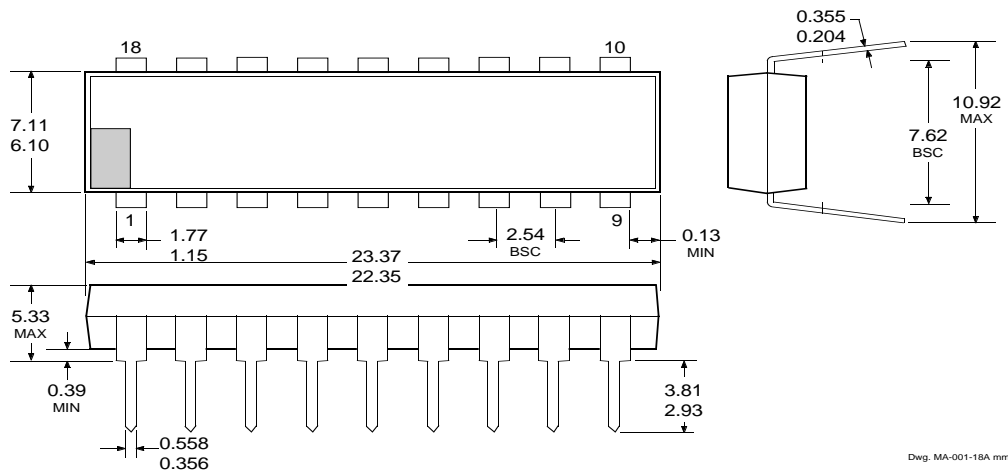
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2985 8-CHANNEL SOURCE DRIVER

Dimensions in Inches (controlling dimensions)



Dimensions in Millimeters (for reference only)



- NOTES: 1. Exact body and lead configuration at vendor's option within limits shown.
2. Lead spacing tolerance is non-cumulative.
3. Lead thickness is measured at seating plane or below.

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8-CHANNEL
SOURCE DRIVER

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