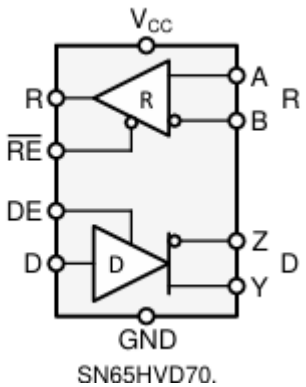
Josnell Tejeda Electiva 2025 C2

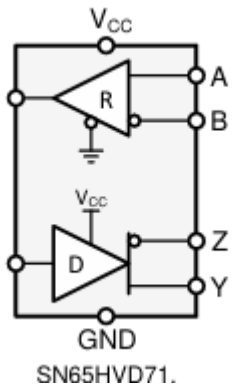
RS-485

The SN65HVD147x family of full-duplex transceivers feature the highest ESD protection in the RS-485 portfolio, supporting ±16-kV IEC61000-4-2 contact discharge and > ±30-kV HBM ESD protection. These RS-485 transceivers have robust 3.3-V drivers and receivers and are offered in a standard SOIC package as well as in a small-footprint MSOP package. The large receiver hysteresis of the SN65HVD147x devices provides immunity to conducted differential noise and the wide operating temperature enables reliability in harsh operating environments. 1 These devices each combine a differential driver and a differential receiver, which operate from a single 3.3-V power supply. Each driver and receiver has separate input and output pins for full-duplex bus communication designs. These devices all feature a wide common-mode voltage range which makes the devices suitable for multi-point applications over long cable runs.

PART NUMBER	PACKAGE	BODY SIZE (NOM)
SN65HVD71 SN65HVD74 SN65HVD77	MSOP (8)	3.00 mm × 3.00 mm
	SOIC (8)	4.90 mm × 3.91 mm
SN65HVD70 SN65HVD73 SN65HVD76	MSOP (10)	3.00 mm × 3.00 mm
	SOIC (14)	8.65 mm × 3.91 mm



SN65HVD70.



SN65HVD71.

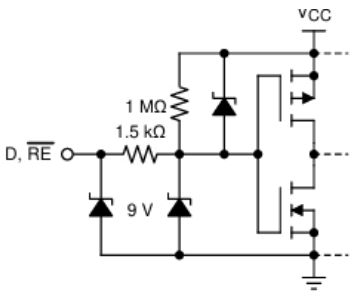


Figure 25. D and $\overline{RE}$ Inputs

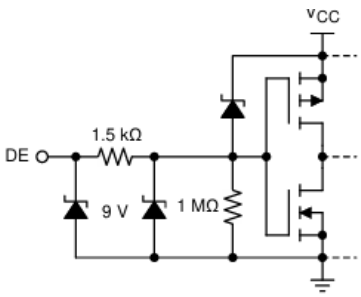


Figure 26. DE Input

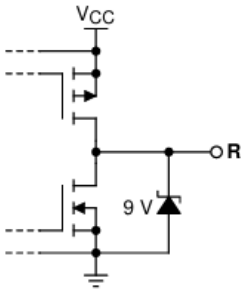


Figure 27. R Output

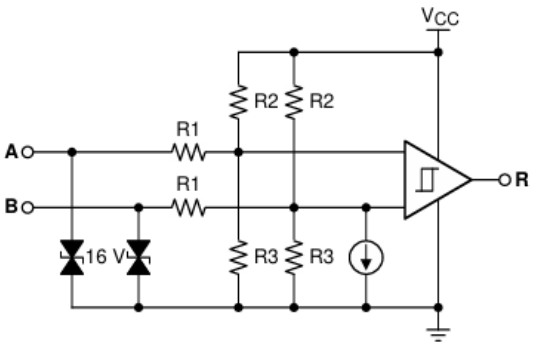
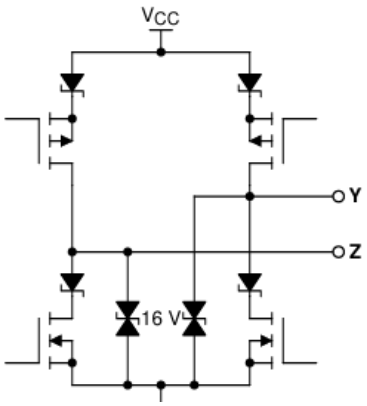
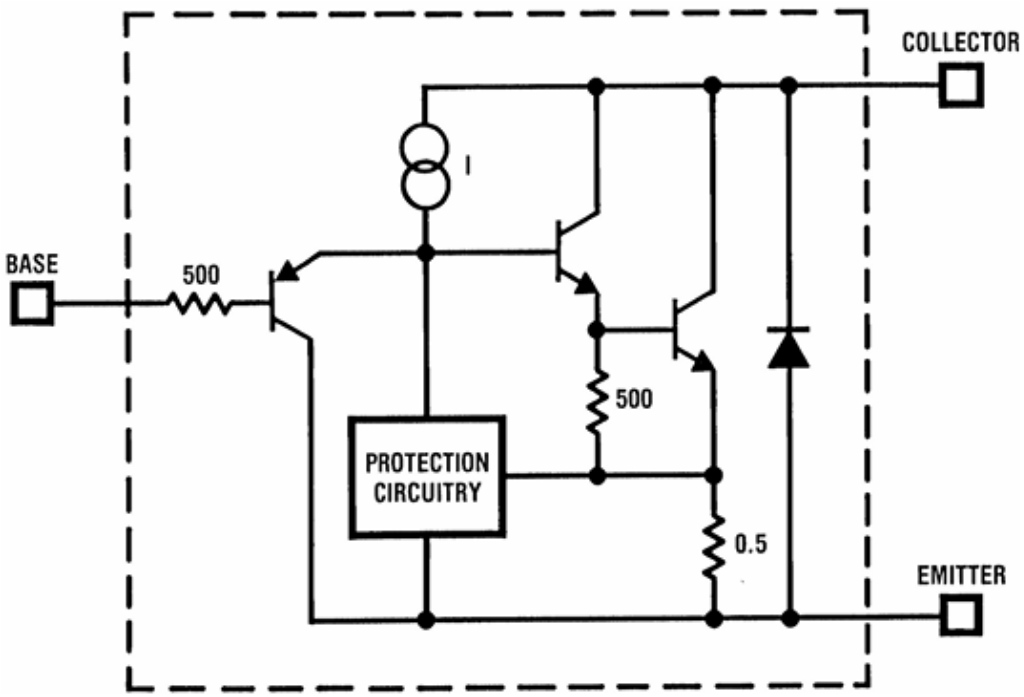


Figure 28. Receiver Inputs



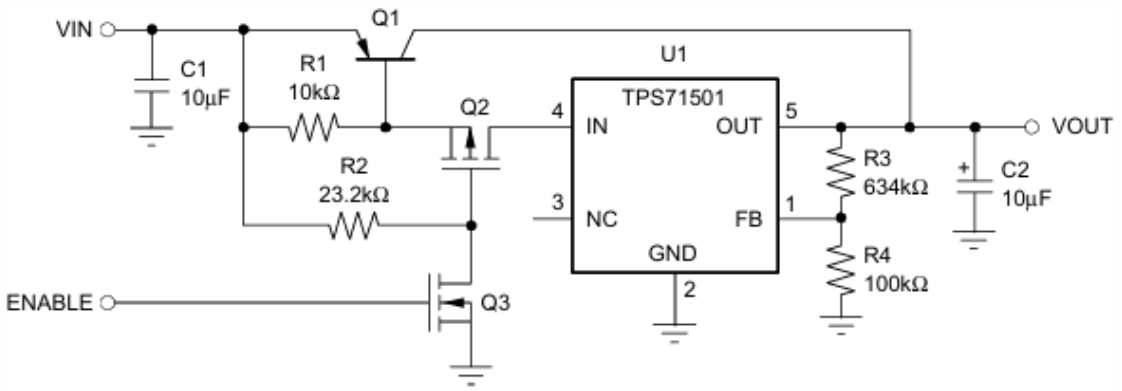
Entradas digitales npn y pnp

The LP395 is a fast monolithic transistor with complete overload protection. This very high gain transistor has included on the chip, current limiting, power limiting, and thermal overload protection, making it difficult to destroy from almost any type of overload. Available in an epoxy TO-92 transistor package this device is specified to deliver 100 mA. Thermal limiting at the chip level, a feature not available in comprehensive discrete protection designs, against Excessive power dissipation or inadequate heat sinking causes the thermal limiting circuitry to turn off the device preventing excessive die temperature. The LP395 offers a significant increase in reliability while simplifying protection circuitry.



PNP

Some applications require an output current capability greater than what is available in the standard low-dropout regulator (LDO) product line. An example of such an application would be a circuit requiring a 9V output capable of supplying 1A from an input voltage range of 10.5V to 12V. Finding a regulator to meet these requirements presents several difficulties. While most general-purpose linear regulators can handle the input voltage range, the dropout specification is difficult to meet. Other low-dropout solutions may have a limited input or output voltage range that restricts their use in such applications. By using an external PNP transistor, some regulators can be adapted to meet these input and output voltage range requirements. For example, although the TPS71501 output current is only 50mA, using an external PNP transistor increases the output current capability to 1ª.



Señales Analógicas de 0-10 V

Las señales de 0-10 V se utilizan para controlar dispositivos como variadores de frecuencia o actuadores. Un diseño típico incluye un DAC (convertidor digital a analógico) seguido de un amplificador operacional para escalar la señal a 10 V. Por ejemplo, el DAC80501 de Texas Instruments puede configurarse para proporcionar una salida de 0-10 V

Señales de Corriente de 4-20 mA

Las señales de 4-20 mA son estándar en la transmisión de señales analógicas en entornos industriales debido a su resistencia al ruido y capacidad para detectar fallos en el circuito. Un diseño común utiliza un DAC para generar una señal de voltaje que luego se convierte en una corriente de 4-20 mA mediante un circuito de conversión. Texas Instruments ofrece diseños de referencia para implementar transmisores de corriente de 4-20 mA .