

DALLAS

SEMICONDUCTOR

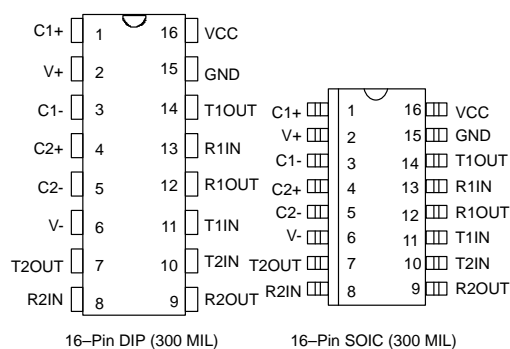
DS1228

+5V Powered Dual RS-232 Transmitter/Receiver

FEATURES

- Operates from a single 5V power supply
- Two drivers and two receivers
- Meets all EIA RS-232-C specifications
- On-board voltage doubler
- On-board voltage inverter
- $\pm 30V$ input levels
- $\pm 9V$ output levels with + 5V supply
- Low-power CMOS
- Pin-compatible with the MAX 232
- Optional 16-pin SOIC surface mount package

PIN ASSIGNMENT



PIN DESCRIPTION

| | | |
|-----------------|---|-------------------------|
| C1+, C1 | - | Capacitor 1 Connections |
| C2+, C2 | - | Capacitor 2 Connections |
| V+, V- | - | ± 10 Volts |
| T1IN, T2IN | - | Transmitter In |
| T1OUT, T2OUT | - | Transmitter Out |
| R1IN, R2IN | - | Receiver In |
| R1OUT, R2OUT | - | Receiver Out |
| V _{CC} | - | +5 Volts |
| GND | - | Ground |

DESCRIPTION

The DS1228 is a dual RS-232-C Receiver/Transmitter that meets all EIA specifications while operating from a single, +5 volt supply. The DS1228 has two internal charge pumps. One of the charge pumps is used to generate +10 volts. The other is used to generate -10 volts. The DS1228 also contains four level translators. Two of the level translators are RS-232 transmitters which convert TTL/CMOS inputs into $\pm 9V$ RS-232 outputs. The other two level translators are capable of operating with

up to $\pm 30V$ inputs. The DS1228 is suitable for all RS-232 communications and is particularly valuable where higher voltage power supplies for RS-232 drivers are not available. The power supply section of the DS1228 supplies ± 10 volts from the V_{CC} input.

See the DS1229 data sheet for electrical specifications and operation.