

DALLAS

SEMICONDUCTOR

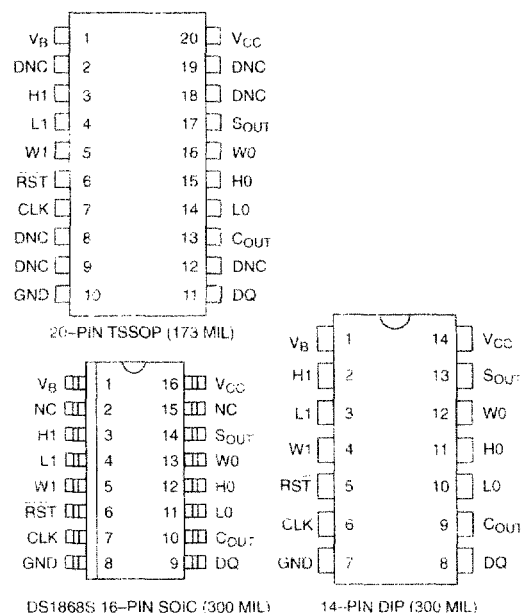
DS1868

Dual Digital Potentiometer Chip

FEATURES

- Ultra-low power consumption, quiet, pumpless design
- Two digitally controlled, 256-position potentiometers
- Serial port provides means for setting and reading both potentiometers
- Resistors can be connected in series to provide increased total resistance
- 20-pin TSSOP package
- Resistive elements are temperature compensated to ± 0.3 LSB relative linearity
- Standard resistance values:
 - DS1868-10 $\sim 10k\Omega$
 - DS1868-50 $\sim 50k\Omega$
 - DS1868-100 $\sim 100k\Omega$
- +5V or $\pm 3V$ operation
- Temperature: 0°C to 70°C commercial
–40°C to 85°C industrial

PIN ASSIGNMENT



DS1868S 16-PIN SOIC (300 MIL)

14-PIN DIP (300 MIL)

PIN DESCRIPTION

- L0, L1 – Low End of Resistor
- H0, H1 – High End of Resistor
- W0, W1 – Wiper Terminal of Resistor
- S_{OUT} – Stacked Configuration Output
- RST – Serial Port Reset Input
- DQ – Serial Port Data Input
- CLK – Serial Port Clock Input
- C_{OUT} – Cascade Port Output
- V_{CC} – +5 Volt Supply
- GND – Ground Connections
- NC – No Internal Connection
- V_B – Substrate Bias Voltage
- DNC – Do Not Connect

*All GND pins must be connected to ground.

DESCRIPTION

The DS1868 consist of two digitally controlled solid-state potentiometers. Each potentiometer is composed of 256 resistive sections. Between each resistive sec-

tion and both ends of the potentiometer are tap points which are accessible to the wiper.