



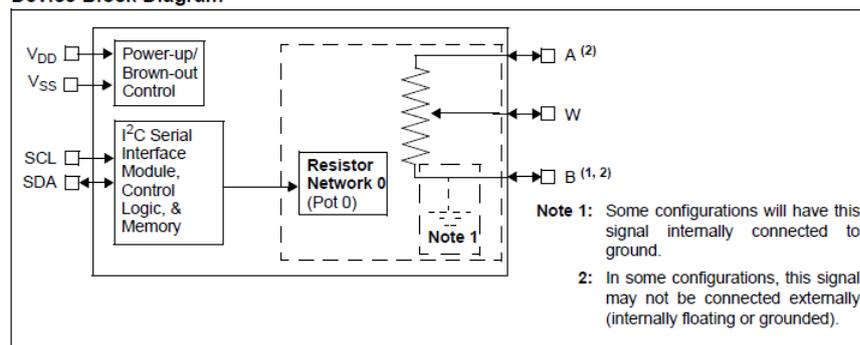
## MCP40D18 7-Bit Single I2C™ (with Command Code) Digital POT

### General Description:

The MCP40D17/8/9 devices offer a wide range of product offerings using an I2C™ Compatible interface. This family of devices supports a 7-bit resistor network, volatile memory configuration, and potentiometer and rheostat pin outs. This device family is offered in miniature 5 and 6 lead SC-70 packaging.



Device Block Diagram



### Key Features:

- Potentiometer or Rheostat configuration options
- 7-bit: Resistor Network Resolution - 127 Resistors (128 Steps)
- Zero Scale to Full Scale Wiper operation or 100kohm,
- RAB Resistances: 5kohm, 10kohm, 50kohm
- Low Wiper Resistance: 100ohm (typical)
- Low Tempco:
  - Absolute (Rheostat): 50 ppm typical (0°C to 70°C)
  - Ratiometric (Potentiometer): 15 ppm typical
- Simple I2C™ Compatible Protocol with read & write commands

- Brown-out reset protection (1.5V typical)
- Power-on Default Wiper Setting (Mid-scale)
- Low-Power Operation: 2.5  $\mu$ A Static Current (typ)
- Wide Operating Voltage Range:
  - 2.7V to 5.5V - Device Characteristics Specified
  - 1.8V to 5.5V - Device Operation

## Applications:

- PC Servers (I2C Protocol with Command Code)
- Amplifier Gain Control and Offset Adjustment
- Sensor Calibration (Pressure, Temperature, Position, Optical and Chemical)
- Set point or offset trimming
- Cost-sensitive mechanical trim pot replacement
- RF Amplifier Biasing
- LCD Brightness and Contrast Adjustment

## Related Products Information:

Mfr Part #	Farnell #	Newark #	Description
MCP40D18T-103E/LT	1800213	25R7941	7-Bit Single I2C™(with Command Code)Digital POT 10 k $\Omega$ , 6-LD SC70
MCP40D18T-502E/LT	1800214	25R7943	7-Bit Single I2C™(with Command Code)Digital POT 5 k $\Omega$ ,6-LD SC70