

Product Overview

CAT5191: Digital Potentiometer (POT), 256-Tap, I2C Compatible, Extended Temperature Range

For complete documentation, see the data sheet.

The CAT5191 is a 256-position linear taper digital POT ideally suited for replacing mechanical potentiometers and variable resistors. The wiper settings are controlled through an I2C-compatible digital interface. Upon power-up, the wiper assumes a midscale position and may be repositioned anytime after the power is stable. The device can be programmed to reset the wiper position to midscale or to go to a shutdown state during operation. An address input pin, AD0, allows the connection of two devices onto the same I2C bus. The CAT5191 operates from 2.7 V to 5.5 V, while consuming less than 2 μ A. This low operating current, combined with a small package footprint, makes the CAT5191 ideal for battery-powered portable applications. The CAT5191 is designed as a pin for pin replacement for the AD5245 and operates over the -40°C to $+85^{\circ}\text{C}$ industrial temperature range.

Features

- 256-position
- End-to-End Resistance: 50 k Ω
- I2C Compatible Interface
- Power-on Preset to Midscale
- Single Supply 2.7 V to 5.5 V
- Low Temperature Coefficient 100 ppm/ $^{\circ}\text{C}$
- Low Power, IDD 2 μ A max
- Extended Operating Temperature -40°C to $+125^{\circ}\text{C}$

Applications

- Potentiometer Replacement
- Transducer Adjustment of Pressure, Temperature, Position, Chemical, and Optical Sensors
- RF Amplifier Biasing
- Gain Control and Offset Adjustment

End Products

- Industrial Equipment

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	# of Pots	# of Taps	Type	Control Interface	Resistance Typ (k Ω)	V _H Max (V)	Wiper Position Memory	V _{DD} Max (V)	Package Type
CAT5191TBE-50GT3	0.6133	Pb-free Halide free non AEC-Q and PPAP	Active	1	256	Potentiometer	I2C	50	V _{CC}	No	5.5	SOT-23-8

For more information please contact your local sales support at www.onsemi.com.

Created on: 1/17/2021