

Product Overview

CAT5137: Digital Potentiometer (POT), 128-Tap, with I2C Interface

For complete documentation, see the data sheet.

CAT5136, CAT5137, and CAT5138 are a family of digital POTs operating like mechanical potentiometers in various configurations. The tap points between the 127 equal resistive elements are connected to the wiper output via CMOS switches. The switches are controlled by a 7-bit Wiper Control Register (WCR) via the I²C serial bus. CAT5136 is configured as a variable resistor. CAT5137 and CAT5138 are resistive voltage dividers, with one terminal of the potentiometer connected to GND. CAT5137 and CAT5138 have different device IDs, which makes it possible to use both on the same I²C bus. Upon power-up, the WCR is set to mid-scale (1000000).

Features

- Single Linear digital POT with 128 Taps
- I²C Interface
- Low Standby Current
- End-to-End Resistance of 10 kΩ, 50 kΩ and 100 kΩ
- Wiper goes to Midscale at Power-up
- Digital Supply Range (V_{DD}): 2.7 V to 5.5 V
- Industrial Temperature Range: -40°C to +85°C

Applications

- LCD Screen Adjustment
- Volume Control
- Mechanical Potentiometer Replacement
- Gain Adjustment
- Line Impedance Matching

Benefits

- High Resolution
- Easy to Integrate in Application
- Low Power Loss

End Products

- Industrial Equipment

Part Electrical Specifications

Product	Compliance	Status	# of Pots	# of Taps	Type	Control Interface	Resistance Typ (kΩ)	V _H Max (V)	Wiper Position Memory	V _{DD} Max (V)	Package Type
CAT5137SDI-00GT3	Pb-free Halide free	Active	1	128	Potentiometer	I2C	50	VCC	No	5.5	SC-88-6 / SC-70-6 / SOT-363-6

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

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