

Product Overview

CAT5241: Digital Potentiometer (POT), 64-Tap, Quad, with I2C Interface

For complete documentation, see the data sheet.

The CAT5241 is four digital POTs integrated with control logic and 16 bytes of EEPROM memory. Each digital POT consists of a series of 63 resistive elements connected between two externally accessible end points. The tap points between each resistive element are connected to the wiper outputs with CMOS switches. A separate 6-bit control register (WCR) independently controls the wiper tap switches for each digital POT. Associated with each wiper control register are four 6-bit non-volatile memory data registers (DR) used for storing up to four wiper settings. Writing to the wiper control register or any of the non-volatile data registers is via a 2-wire serial bus (I²C-like). On power-up, the contents of the first data register (DR0) for each of the four potentiometers is automatically loaded into its respective wiper control register (WCR). The CAT5241 can be used as a potentiometer or as a two terminal, variable resistor. It is intended for circuit level or system level adjustments in a wide variety of applications.

Features

- Four linear-taper digital potentiometers
- 64 resistor taps per potentiometer
- End to end resistance 2.5 kΩ, 10 kΩ, 50 kΩ or 100 kΩ
- Potentiometer control and memory access via 2-wire interface (I²C like)
- Low wiper resistance, typically 80 Ω
- Nonvolatile memory storage for up to four wiper settings for each potentiometer
- Automatic recall of saved wiper settings at power up
- 2.5 to 6.0 volt operation
- Standby current less than 1 μA
- 1,000,000 nonvolatile WRITE cycles

For more features, see the data sheet

Applications

- Audio Equipment
- Industrial Controls

End Products

- Automobiles
- Industrial Equipment

Part Electrical Specifications

Product	Pricing (\$/Unit)	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
CAT5241WI-00-T1	4.3332	Pb-free Halide free	Active	4	64	Potentiometer	I2C	100	VCC	Yes	6	SOIC-20W
CAT5241WI-10-T1	4.5499	Pb-free Halide free	Active	4	64	Potentiometer	I2C	10	VCC	Yes	6	SOIC-20W
CAT5241WI-25-T1	4.3332	Pb-free Halide free	Active	4	64	Potentiometer	I2C	2.5	VCC	Yes	6	SOIC-20W
CAT5241WI-50-T1	5.0859	Pb-free Halide free	Active	4	64	Potentiometer	I2C	50	VCC	Yes	6	SOIC-20W
CAT5241YI-00-T2	4.3332	Pb-free Halide free	Active	4	64	Potentiometer	I2C	100	VCC	Yes	6	TSSOP-20
CAT5241YI-10-T2	4.3332	Pb-free Halide free	Active	4	64	Potentiometer	I2C	10	VCC	Yes	6	TSSOP-20
CAT5241YI-25-T2	3.334	Pb-free Halide free	Active	4	64	Potentiometer	I2C	2.5	VCC	Yes	6	TSSOP-20
CAT5241YI-50-T2	4.3332	Pb-free Halide free	Active	4	64	Potentiometer	I2C	50	VCC	Yes	6	TSSOP-20

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

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