Product Overview

CAT5115: Digital Potentiometer (POT), 32-Tap

For complete documentation, see the data sheet.

The CAT5115 is a single digital POT designed as an electronic replacement for mechanical potentiometers and trim pots. Ideal for automated adjustments on high volume production lines, they are also well suited for applications where equipment requiring periodic adjustment is either difficult to access or located in a hazardous or remote environment.

The CAT5115 contains a 32-tap series resistor array connected between two terminals R_H and R_L. An up/down counter and decoder that are controlled by three input pins, determines which tap is connected to the wiper, R_W. The wiper is always set to the mid point, tap 15 at power up. The tap position is not stored in memory. Wiper-control of the CAT5115 is accomplished with three input control pins, CS, U/D, and INC. The INC input increments the wiper in the direction which is determined by the logic state of the U/D input. The CS input is used to select the device.

The digital POT can be used as a three-terminal resistive divider or as a two-terminal variable resistor. Digital POTs bring variability and programmability to a wide variety of applications including control, parameter adjustments, and signal processing.

Features

- 32-position, Linear Taper Potentiometer
- Low Power CMOS Technology
- Single Supply Operation: 2.5 V - 6.0 V
- Increment Up/Down Serial Interface
- Resistance Values: 10 kΩ, 50 kΩ and 100 kΩ

Applications

- Automated Product Calibration
- Remote Control Adjustments
- Offset, Gain and Zero Control
- Tamper-proof Calibrations
- Contrast, Brightness and Volume Controls

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
CAT5115VI-00-GT3	Pb-free Halide free	Active	1	32	Potentiometer	Up/Down	100	VCC	No	6	SOIC-8
CAT5115VI-10-GT3	Pb-free Halide free	Active	1	32	Potentiometer	Up/Down	10	VCC	No	6	SOIC-8
CAT5115VI-50-GT3	Pb-free Halide free	Active	1	32	Potentiometer	Up/Down	50	VCC	No	6	SOIC-8
CAT5115YI-00-GT3	Pb-free Halide free	Active	1	32	Potentiometer	Up/Down	100	VCC	No	6	TSSOP-8
CAT5115YI-10-GT3	Pb-free Halide free	Active	1	32	Potentiometer	Up/Down	10	VCC	No	6	TSSOP-8
CAT5115YI-50-GT3	Pb-free Halide free	Active	1	32	Potentiometer	Up/Down	50	VCC	No	6	TSSOP-8
CAT5115ZI-00-GT3	Pb-free Halide free	Active	1	32	Potentiometer	Up/Down	100	VCC	No	6	MSOP-8
CAT5115ZI-10-GT3	Pb-free Halide free	Active	1	32	Potentiometer	Up/Down	10	VCC	No	6	MSOP-8

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

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