

NCV7120

Hex Solenoid Current Controller with N-FET Predrivers

Product Overview

For complete documentation, see the data sheet.

The NCV7120 is a sixchannel solenoid current controller with low side predrivers for discrete NFETs. The chip can be used in accurate current controlled solenoid applications. Each predriver channel contains a programmable PWM current controller with dithering modulation. The NCV7120 is accessible via SPI. For safety and protection, the chip is equipped with 3 high side predrivers. Two of these can be used to switch a common top predriver. One high side driver can be used for active reverse polarity protection. The NCV7120 has advanced diagnostic features and fault protection functions.

Features

- Operating Supply Range from 6 V up to 26 V
  - 6Channel Solenoid Current Measurement and Control
  - Average Current up to 1.2 A, Peak Current up to 1.65 A
  - Accuracy ± 3mA to ± 6mA in Operating Range
  - Onchip Sense Resistors
  - Low Side FET predriver ON, OFF or PWM (1 kHz ... 5 kHz)
  - Programmable Kp, Ki, Dither Amplitude and Frequency
  - Open- and Overcurrent Detection and Protection per Channel
  - Tj up to 150°C
  - AEC-Q100 Qualified and PPAP Capable
- For more features, see the data sheet


Applications

- Automotive powertrain, body and chassis applications
- Hydraulic Controls
- Pneumatic Controls
- Accurate Current Controls
- Proportional Valves

End Products

- TCU or TCM - Transmission Control Unit / Module
- PCM - Power Control Unit
- ECU - Engine Control Unit
- Suspension Control Unit
- Engine Management System

Part Electrical Specifications

Product	Status	Compliance	Num ber of Drive rs	V <sub>CC</sub> Max (V)	V <sub>(BR)G</sub> SS Max (V)	V <sub>(BR)D</sub> SS Max (V)	I <sub>D</sub> Max (A)	r <sub>DS(on)</sub> Max (Ω)	T <sub>j</sub> Max (°C)	Pack age Type	Case Outli ne	MSL Type	MSL Tem p (°C)	Cont ainer Type	Cont ainer Qty.
NCV7120FP0R2G	Last Shipments		6	30	~NA	~NA	1.2	~NA	150	TQFP-64 EP	136A C.PDF	3	260	REEL	1500