

Octal Solenoid Current Controller with N-FET Predrivers

Product Preview NCV71208

NCV71208 is an eight-channel solenoid current controller with low side predrivers for discrete N-FETs. The chip can be used in accurate current controlled solenoid applications.

Each predriver channel contains a programmable PWM current controller with dithering modulation.

The NCV71208 has an SPI interface and advanced diagnostic features with fault protection functions. Each channel monitors its external MOSFET for fault conditions. An open drain fault output notifies the host controller immediately upon detection of a fault or error. The specific fault source information can be read back via SPI. The fault/error flags are cleared after a 32-bit SPI read of the appropriate register.

Features

- Supply Voltage Range from 4.2 V up to 30 V
- 8-Channel Solenoid Current Measurement and Control
- Average Current up to 1.2 A
- Accuracy +/- 3 mA in Operating Range
- On-chip Sense Resistors with EEPROM Calibration Data
- Low Side FET ON, OFF or PWM (1 kHz ... 5 kHz)
- Programmable Dither Amplitude and Frequency
- Programmable Kp and Ki Parameters
- Overcurrent Detection and Protection per Channel
- Overtemperature Detection and Protection per Channel
- Non-qualified Pre-production Samples Available
- Supporting ISO-26262 Documentation Available

Typical Applications

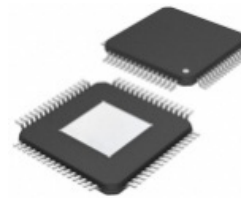
- Linear Solenoids in Transmission and Suspension
- Hydraulic and Pneumatic Control
- Medical Applications

This document contains information on a product under development. ON Semiconductor reserves the right to change or discontinue this product without notice.



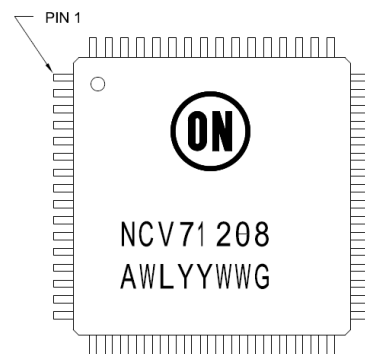
ON Semiconductor™

www.onsemi.com



TQFP-64 EP
10x10
CASE 136AC

MARKING DIAGRAM



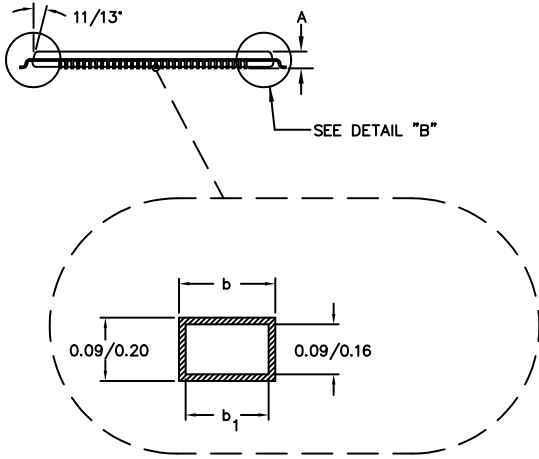
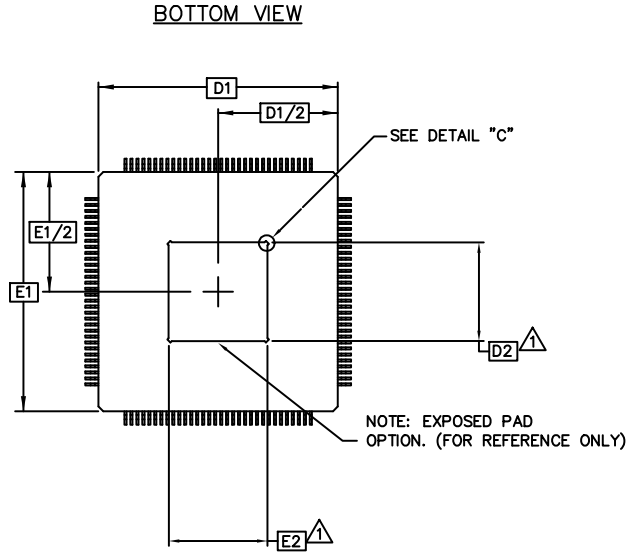
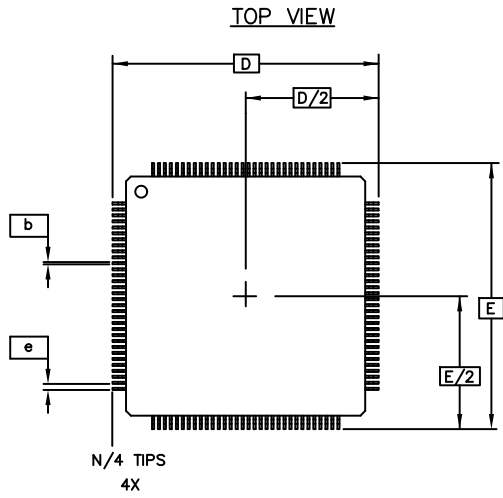
SAFETY SUPPORT

Support integration into customer's safety application with a set of safety documents including FME-DA and a hardware-software interface document.

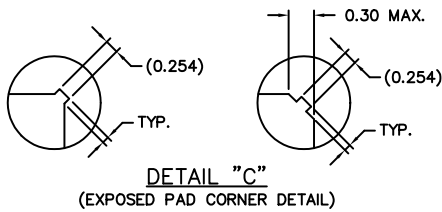
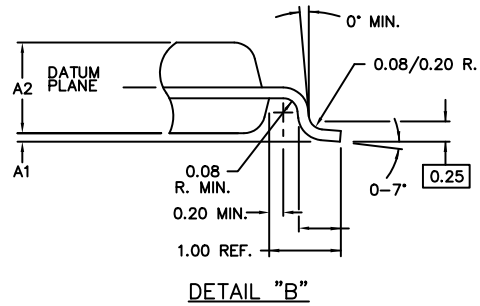
NCV71208

PACKAGE DIMENSIONS

TQFP-64 EP, 10x10
CASE 136AC
ISSUE O




▲ DIMENSION D2 AND E2 REPRESENT THE SIZE OF THE EXPOSED PAD. THE ACTUAL DIMENSIONS ARE SPECIFIED ON THE BONDING DIAGRAM, AND IS DEPENDENT ON THE DIE SIZE.



D2 = E2 = 7 mm

SYMBOL	JEDEC VARIATION		
	ALL DIMENSIONS IN MILLIMETERS		
	MIN.	NOR.	MAX.
A	~	~	1.20
A1	0.05	~	0.15
A2	0.95	1.00	1.05
D	12.00 BSC.		
D1	10.00 BSC.		
E	12.00 BSC.		
E1	10.00 BSC.		
L	0.45	0.60	0.75
N	64		
e	0.50 BSC.		
b	0.17	0.22	0.27
b1	0.17	0.20	0.23

ON Semiconductor and  are trademarks of Semiconductor Components Industries, LLC dba ON Semiconductor or its subsidiaries in the United States and/or other countries. ON Semiconductor owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of ON Semiconductor's product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. ON Semiconductor reserves the right to make changes without further notice to any products herein. ON Semiconductor makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does ON Semiconductor assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. Buyer is responsible for its products and applications using ON Semiconductor products, including compliance with all laws, regulations and safety requirements or standards, regardless of any support or applications information provided by ON Semiconductor. "Typical" parameters which may be provided in ON Semiconductor data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. ON Semiconductor does not convey any license under its patent rights nor the rights of others. ON Semiconductor products are not designed, intended, or authorized for use as a critical component in life support systems or any FDA Class 3 medical devices or medical devices with a same or similar classification in a foreign jurisdiction or any devices intended for implantation in the human body. Should Buyer purchase or use ON Semiconductor products for any such unintended or unauthorized application, Buyer shall indemnify and hold ON Semiconductor and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that ON Semiconductor was negligent regarding the design or manufacture of the part. ON Semiconductor is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:

Literature Distribution Center for ON Semiconductor
19521 E. 32nd Pkwy, Aurora, Colorado 80011 USA
Phone: 303-675-2175 or 800-344-3860 Toll Free USA/Canada
Fax: 303-675-2176 or 800-344-3867 Toll Free USA/Canada
Email: orderlit@onsemi.com

N. American Technical Support: 800-282-9855 Toll Free
USA/Canada
Europe, Middle East and Africa Technical Support:
Phone: 421 33 790 2910

ON Semiconductor Website: www.onsemi.com

Order Literature: <http://www.onsemi.com/orderlit>

For additional information, please contact your local Sales Representative