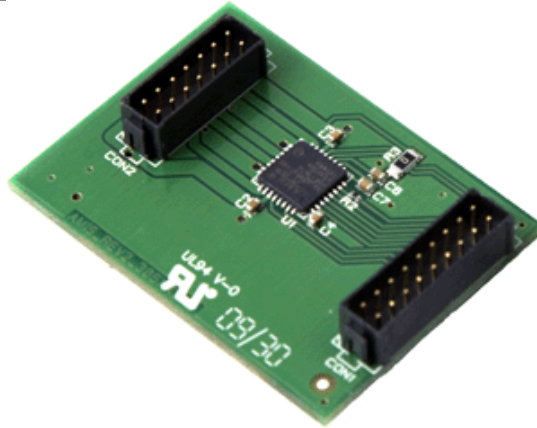




## NV705223R1DBGEB: Daughterboard SPI Stepper Driver with Voltage Regulator (NQFP) Evaluation Board

### Evaluation Board Description

The NV705223R1DBGEB is a form factor Reference Design for driving bipolar stepper motors. The reference design can be interfaced via I/O pins and the SPI bus to an external microcontroller. In conjunction with the NCV7052xGEVK evaluation kit it forms a complete solution turning high level commands from a CAN node in well defined motions. The design incorporates the lowest bill of materials, small board size and perfect matched thermal resistance allowing to drive 800 mA at elevated ambient temperature or even 1.6A under certain conditions.



Note: This board must be used with the [NCV7052XGEVK Automotive Stepper Motor Driver Kit](#).

### Features and Applications

#### Features

- Low bill of materials
- Small form factor (40mm x 32mm (20mm x 15mm active area))
- Plug and Play in combination with NCV7052xGEVK
- Microstepping (full step, 1/2(compensated and uncompensated), 1/4, 1/8, 1/16, 1/32)
- Nominal current of 800mA (1.6A under certain conditions)
- Fully integrated current sensing
- 6V-30V supply voltage
- On chip 5V/50mA regulator
- (Watchdog) reset output
- Compatible with 5V and 3.3V microcontroller
- Next step and motion direction input
- Speed and load-angle output
- Diagnostics information
- Thermal warning and thermal shutdown
- Programmable PWM frequency and slope control

#### Applications

- Flap control in HVAC systems
- Headlamp Positioning systems

### Evaluation Board Information

Evaluation Board	Status	Compliance	Short Description	Parts Used	Action
<a href="#">NV705223R1DBGEB</a>	Active	Pb-free	Daughterboard SPI Stepper Driver with Voltage Regulator (NQFP) Evaluation Board	<a href="#">NCV70522MN003G</a> , <a href="#">NCV70522MN003R2G</a>	

### Technical Documents

Type	Document Title	Document ID/Size	Rev
Eval Board: BOM	NV705223R1DBGEB Bill Of Materials ROHS Compliant	<a href="#">NV705223R1DBGEB_BOM_ROHS.PDF</a> - 142.0 KB	0
Eval Board: Gerber	NV705223R1DBGEB Gerber Layout Files (Zip Format)	<a href="#">NV705223R1DBGEB_GERBER.ZIP</a> - 64.0 KB	0

Eval Board:  
Schematic

NV705223R1DBGEBV Schematic

NV705223R1DBGEBV\_SCHEMATIC.PDF - 0  
170.0 KB

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