

# Powertrain control

CY324 – System basis IC for powertrain control units



**BOSCH**

Invented for life



## PRODUCT BENEFITS

- ▶ Suitable for engine and transmission control
- ▶ Supply and communication interfaces on one chip
- ▶ High temperature performance up to 175 °C
- ▶ Extended soft start-up of all regulators
- ▶ Start / stop capability, operating range down to 3V
- ▶ Enhanced diagnosis and protection
- ▶ CAN communication up to 2 Mbit/s

1 CY324



supports  $\mu$ Cs with

# 1.125 – 1.3 V

core voltage @ 1.2A max.

## TASK

CY324 is an integrated power supply and communication solution, specifically designed for use in powertrain control units.

## FUNCTION

CY324 provides highly stable supply voltages for powertrain ECUs. It contains separate voltage supplies for the analog and digital parts, the microcontroller and external bus transceivers for communication. In order to fulfil safety requirements, all output voltages are constantly monitored, a Q & A watchdog supervises the microcontroller.

- ▶ Fast bus communication is supported by an integrated CAN transceiver (up to 2 Mbit/s)
- ▶ A LIN interface allows external communication with other LIN slaves (e.g. alternator control, exchange of diagnosis or dashboard information)
- ▶ An SPI interface connects to the microcontroller

fully functional

# down to 3 V

battery voltage

## TECHNICAL CHARACTERISTICS

Adjustable $\mu$ C supply	1.125 – 1.3 V @ 1.2 A
Linear voltage regulators	3.3 V / 5 V @ 250 mA 3.3 V @ 300 mA 5 V @ 750 mA
Sensor supply	3 $\times$ 5 V, incl. diagnosis
Standby and wake-up capability	
24 bit stop counter	
CAN transceiver	up to 2 Mbit/s
LIN interface	LIN2.1
SPI	16 bit
Operating temperature (Tj)	-40 $^{\circ}$ C – 175 $^{\circ}$ C
Package	Bare die, TQFP100ePad on request

