The PF5103 is a multi-channel PMIC device designed to be used for automotive safety and industrial applications. The PF5103 is configurable making it a great companion and fit for various system level power requirements.

Integrated voltage monitoring circuits ensure compliance with ISO 26262 standard and functional safety ASIL B level. The PF5103 is available as a standard non-safety device for applications that don’t require the ISO 26262 compliance.

The PF5103 is suitable for the application that requires multi power supply, including infotainment, ADAS, vision and radar as a companion to another NXP PMIC a SBC like the FS8x family.

This device is suitable for S32R processors-based applications.
Multi-Channel (5) PMIC for Automotive Applications Block Diagram

PF5103

FUNCTIONAL BLOCK DIAGRAM

PGOOD OUTPUT PIN

INTB OUTPUT PIN/ RSTB INPUT PIN

CLOCK SYNC INPUT PIN/ STANDBY INPUT PIN

XFAILB BIDIRECTIONAL PIN/ FCCU INPUT PIN

MANUAL FREQUENCY TUNING

FREQUENCY SPREAD-SPECTRUM (TRIANGULAR/PSEUDO-RANDOM)

ONE TIME PROGRAMMABLE MEMORY (OTP)

OV/UV MONITORING

BUCK1 (SINGLE/MULTI) (0.5 V TO 3.3 V, 3.5 A)

BUCK2 (SINGLE/MULTI) (0.5 V TO 3.3 V, 3.5 A)

BUCK3 (SINGLE/MULTI) (0.5 V TO 3.3 V, 3.5 A)

LDO1 (0.75 V TO 3.3 V, 0.2 A)

LDO2 (0.75 V TO 3.3 V, 0.5 A)

LOGIC AND CONTROL

I²C MCU INTERFACE
REGULATOR CONTROL
FAULT DETECTION
FUNCTIONAL SAFETY (ABIST, WATCHDOG)

View additional information for Multi-Channel (5) PMIC for Automotive Applications: 3 LVBUCK and 2 LDO, Fit for ASIL B Safety Level.

Note: The information on this document is subject to change without notice.

www.nxp.com

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. The related technology may be protected by any or all of patents, copyrights, designs and trade secrets. All rights reserved. © 2024 NXP B.V.