Application Report
SLVA682A–January 2015–Revised April 2019

BQ769x0 Pin Equivalent Diagrams

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ABSTRACT

This application report contains diagrams of the pin equivalent circuits for each of the pins in the BQ76920, BQ76930, and BQ76940 devices.

Contents

1 Introduction

The BQ769x0 family of robust analog front-end (AFE) devices serves as part of a complete pack monitoring and protection solution for next-generation, high-power systems, such as light electric vehicles, power tools, and uninterruptible power supplies.

In many of these applications, a variety of failure mode effects analysis (FMEA) may be undertaken. To support this, and other kinds of design analysis, an additional level of information regarding the IC pins may be required and is presented in this document.

1.1 Related Documentation

For related documentation, see the following:

- *BQ769x0 3-Series to 15-Series Cell Battery Monitor Family for Li-Ion and Phosphate Data Sheet*
- *BQ76920 Evaluation Module User's Guide*
- *BQ76920, BQ76930, BQ76940 AFE FAQ User's Guide*

2 Pin Configurations

The BQ769x0 family is made up of three different devices, the BQ76920, BQ76930, and BQ76940.

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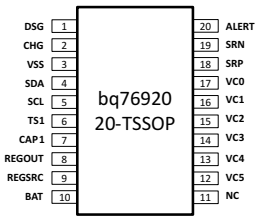
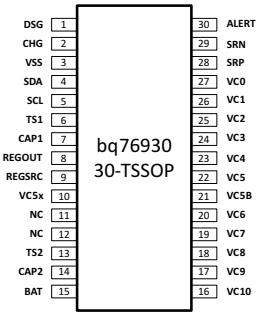
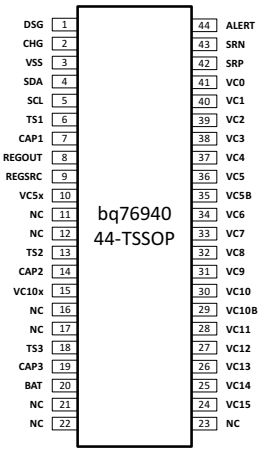
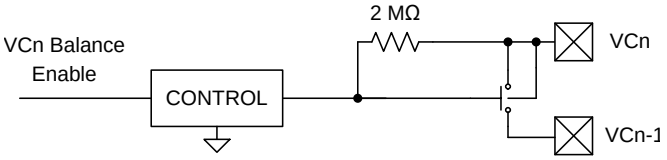
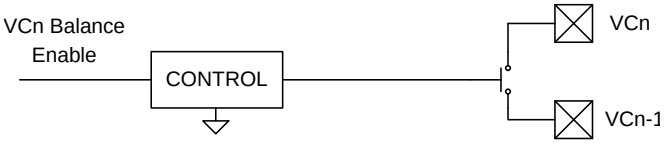
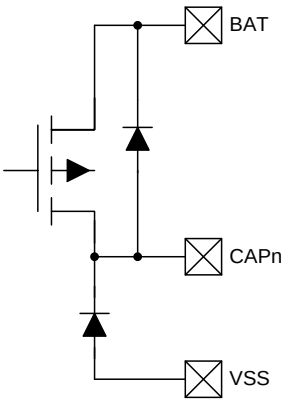
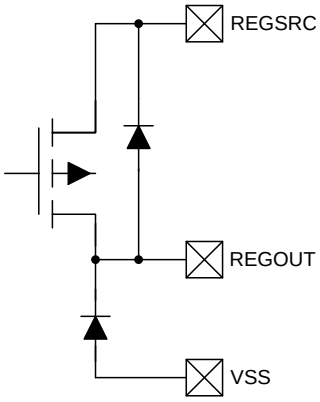
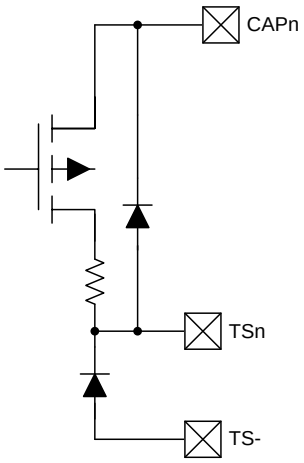


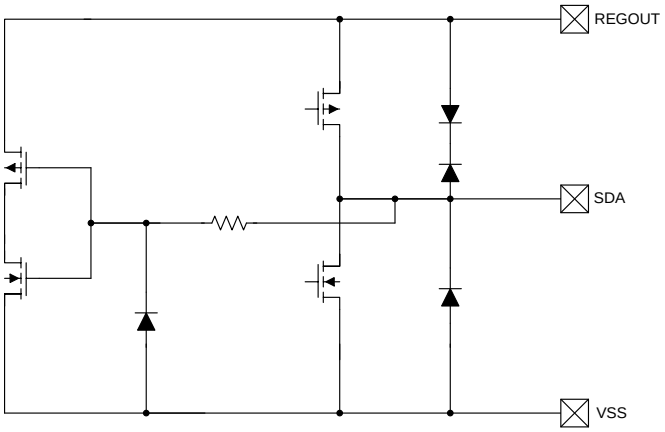
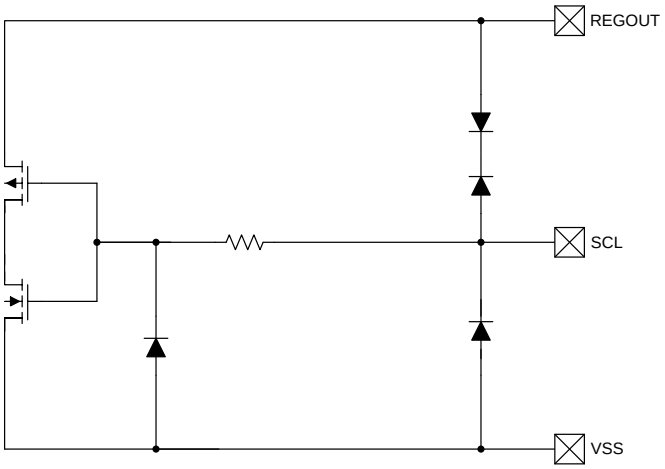
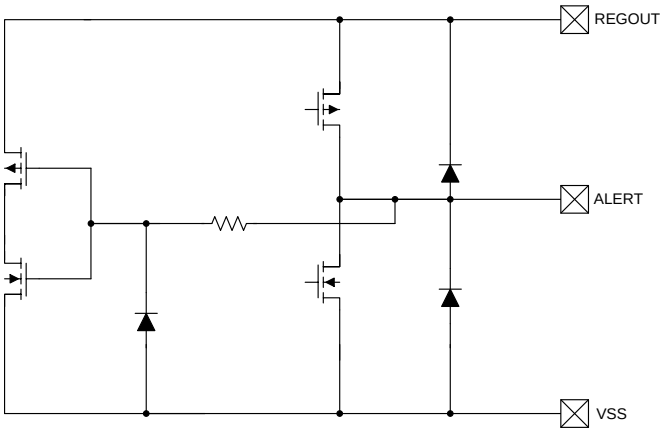


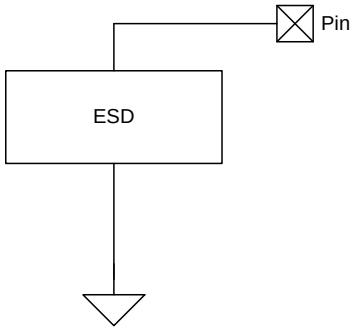
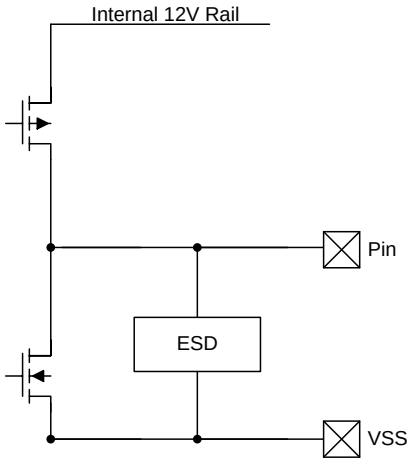
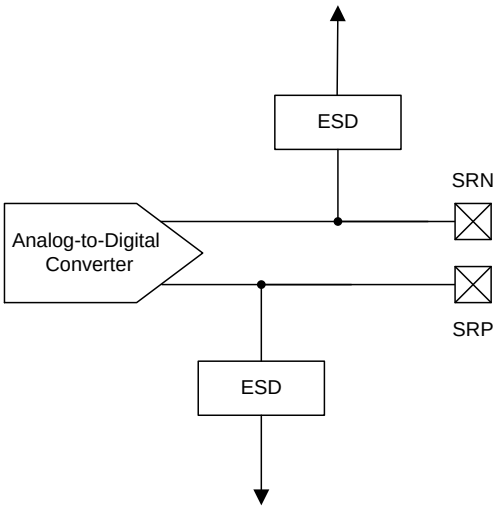


3 Equivalent Pin Diagrams

DEVICE	PIN NAMES	EQUIVALENT PIN DIAGRAM
BQ76920	VCn = VC2, VC3, VC4, VC5	
BQ76930	VCn = VC2, VC3, VC4, VC5, VC7, VC8, VC9, VC10	
BQ76940	VCn = VC2, VC3, VC4, VC5, VC7, VC8, VC9, VC10, VC12, VC13, VC14, VC15	
BQ76920	VCn = VC1	
	VCn-1 = VC0	
BQ76930	VCn = VC1, VC6	
	VCn-1 = VC0, VC5b	
BQ76940	VCn = VC1, VC6, VC11	
	VCn-1 = VC0, VC5b, VC10b	
BQ76920	CAPn = CAP1	
BQ76930	CAPn = CAP1, CAP2	
BQ76940	CAPn = CAP1, CAP2, CAP3	

DEVICE	PIN NAMES	EQUIVALENT PIN DIAGRAM
BQ76920, BQ76930, and BQ76940	REGOUT	
BQ76920	TSn = TS1	
	TS- = VSS	
BQ76930	TSn = TS1, TS2	
	TS- = VSS, VC5x	
BQ76940	TSn = TS1, TS2, TS3	
	TS- = VSS, VC5x, VC10x	

DEVICE	PIN NAMES	EQUIVALENT PIN DIAGRAM
BQ76920, BQ76930, and BQ76940	SDA	
BQ76920, BQ76930, and BQ76940	SCL	
BQ76920, BQ76930, and BQ76940	ALERT	

DEVICE	PIN NAMES	EQUIVALENT PIN DIAGRAM
BQ76920, BQ76930, and BQ76940	Pin = BAT, REGSRC	
BQ76920, BQ76930, and BQ76940	Pin = CHG, DSG	
BQ76920, BQ76930, and BQ76940	SRP, SRN	

Revision History

NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

Changes from Original (January 2015) to A Revision	Page
• Changed all instances of "bq" to "BQ".	1
• Changed the format of the links.	1
• Added two rows.	2
• Changed a pin name.	2

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