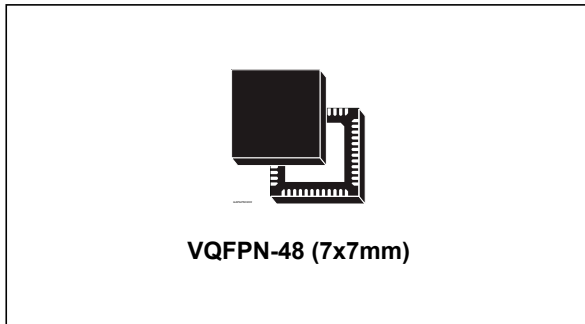


Multiple power management for automotive vision and radar systems

Data brief



Features

- Pre SMPS BUCK1 regulator controller, @ 0.4 MHz
- Pre SMPS BUCK2 regulator, @ 3 A, 2.4 MHz
- Post SMPS BUCK3 regulator, @ 1.5 A, 2.4 MHz
- Post SMPS BUCK4 regulator, @ 0.3 A, 2.4 MHz
- Post Linear regulator LDO, @ 600 mA
- Precise ADC Voltage reference, @ 20 mA
- SPI interface with CRC
- Programmable slew rate/soft start
- Voltage supervisors
- Spread frequency spectrum
- Reset and reset sensitivity list

- Adjustable window watchdog
- Short circuit protected outputs and Fault detection pin to Microcontroller
- Low external components number
- Operating ambient temperature -40 to 105 °C
- Thermal shutdown junction temperature 175 °C
- Qualification in accordance to AEC Q100 standard

Description

The L5965 is a multiple voltage regulator including two battery compatible BUCK pre-regulators, two BUCK post regulators, one BOOST, one LDO and a precise voltage reference regulator.

OTP (One Time Programmable) cells are used for main device parameters and power up phase programming.

An SPI interface can be used for diagnostic information and to program internal blocks parameters.

Voltage supervisors, programmable watchdog, voltage reference and additional safety management functionalities make the product able to supply a microcontroller and fulfill the requirements for automotive cameras and radars.

1 Package information

In order to meet environmental requirements, ST offers these devices in different grades of ECOPACK[®] packages, depending on their level of environmental compliance. ECOPACK[®] specifications, grade definitions and product status are available at: www.st.com. ECOPACK[®] is an ST trademark.

1.1 VFQFPN-48 (7x7x1.0 mm - opt. D) package information

Figure 1. VFQFPN-48 (7x7x1.0 mm - opt. D) package outline

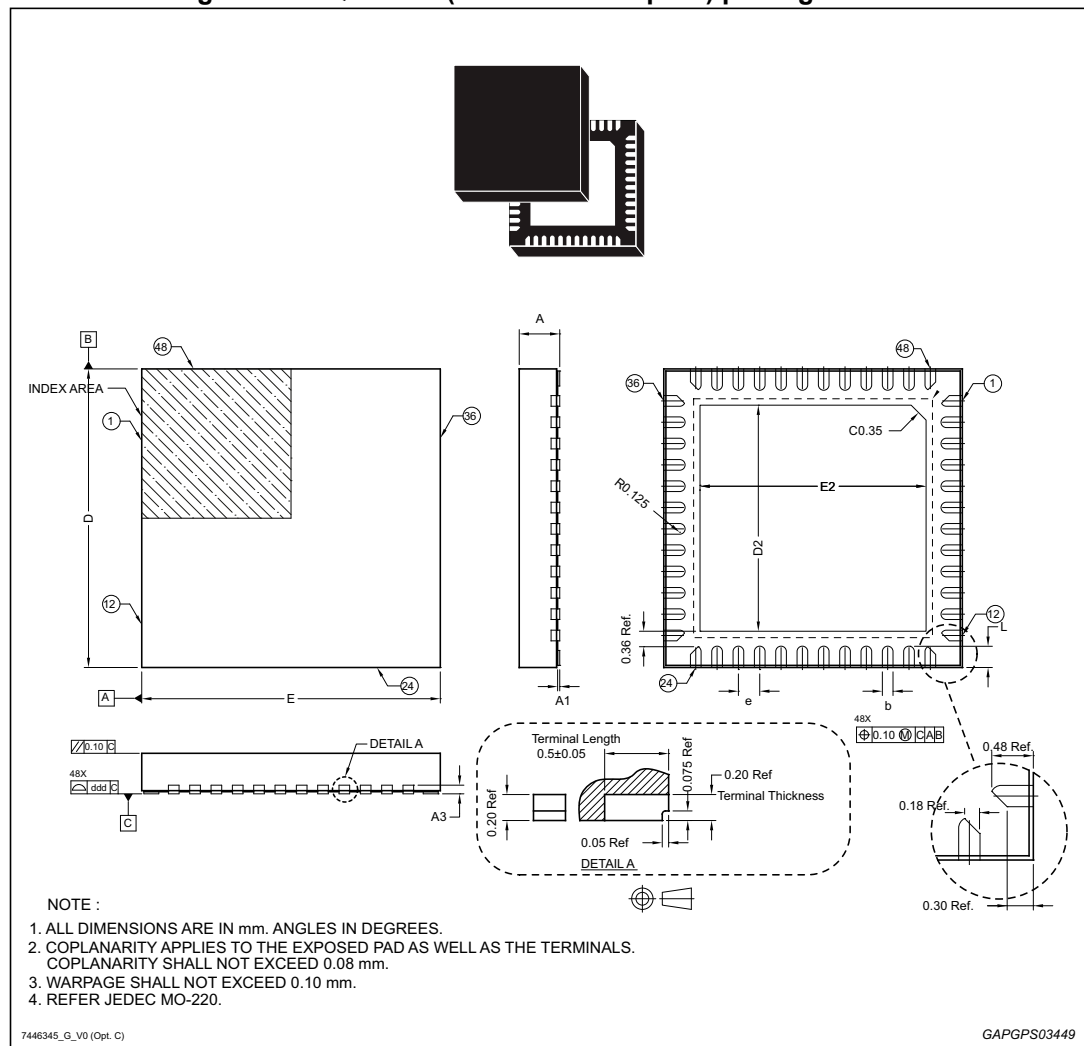


Table 1. VFQFPN-48 (7x7x1.0 - opt. D) package mechanical data

Ref	Dimensions					
	Millimeters			Inches ⁽¹⁾		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	0.85	0.95	1.05	0.0335	0.0374	0.0413
A1	-	-	0.05	-	-	0.0020
A2	-	0.75	-	-	0.0295	-
A3	-	0.200	-	-	0.0079	-
b	0.15	0.25	0.35	0.0059	0.0098	0.0138
D	6.80	7.00	7.15	0.2697	0.2756	0.2815
D2	5.15	5.30	5.45	0.2028	0.2087	0.2146
E	6.85	7.00	7.15	0.2697	0.2756	0.2815
E2	5.15	5.30	5.45	0.2028	0.2087	0.2146
e	0.45	0.50	0.55	0.0177	0.0197	0.0217
L	0.45	0.50	0.55	0.0177	0.0197	0.0217
ddd	-	-	0.08	-	-	0.0031

1. Values in inches are converted from mm and rounded to 4 decimal digits.

2 Revision history

Table 2. Document revision history

Date	Revision	Changes
18-Sep-2015	1	Initial release.

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