

电源管理单元

1 介绍

1.1 特性

- 电源管理内核
 - 双输入电源路径
 - 开关模式充电器
 - 集成充电电流感测场效应晶体管 (FET)
 - 自动电池补充模式
 - 2 个升压转换器
 - 1 个升压转换器支持 2 个发光二极管 (LED) 灯串，每个灯串包括 6 个支持内部和外部调光控制的 LED
 - 1 个升压转换器支持 1 串 6 个 LED
 - 升压转换器也可在持续电压模式中使用
 - LED 矩阵控制器
 - RGB 控制器
 - I²C™ 用于与器件进行低延迟通信的接口

1.2 应用

- 便携式应用

1.3 说明

TPS658310 电源管理单元是一款针对便携式应用的广泛使用、多通道器件。此器件由一个集成电源路径管理和开关模式锂离子电池充电器组成，此充电器通过一个经稳压墙式适配器或一个 USB 端口为系统供电。它还使用集成背光升压来处理照明管理，处理针对键区的 LED 矩阵控制器、相机闪光灯 LED 控制器、电流源和 RGB 通道。

要获得完整数据表，请发邮件至：

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I²C is a trademark of NPX Corporation.

1.4 方框图

图 1-1中显示了经简化的 TPS658310 系统图。

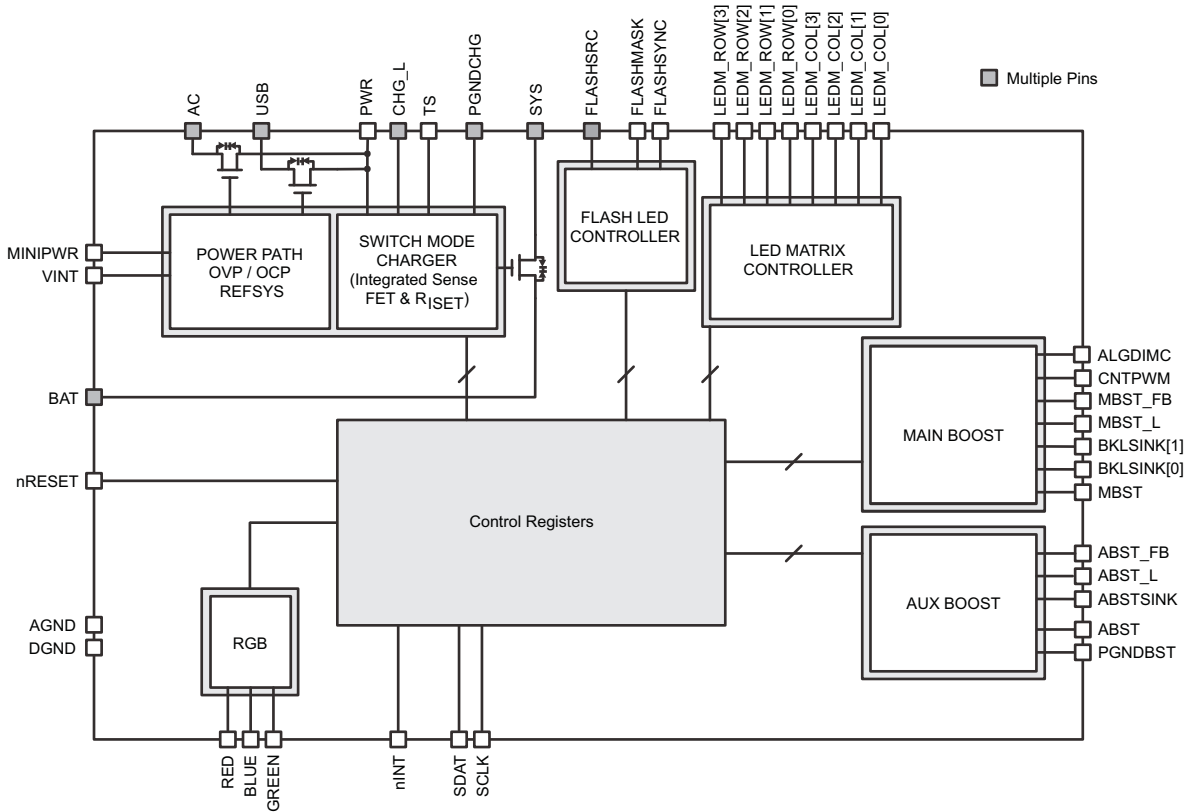
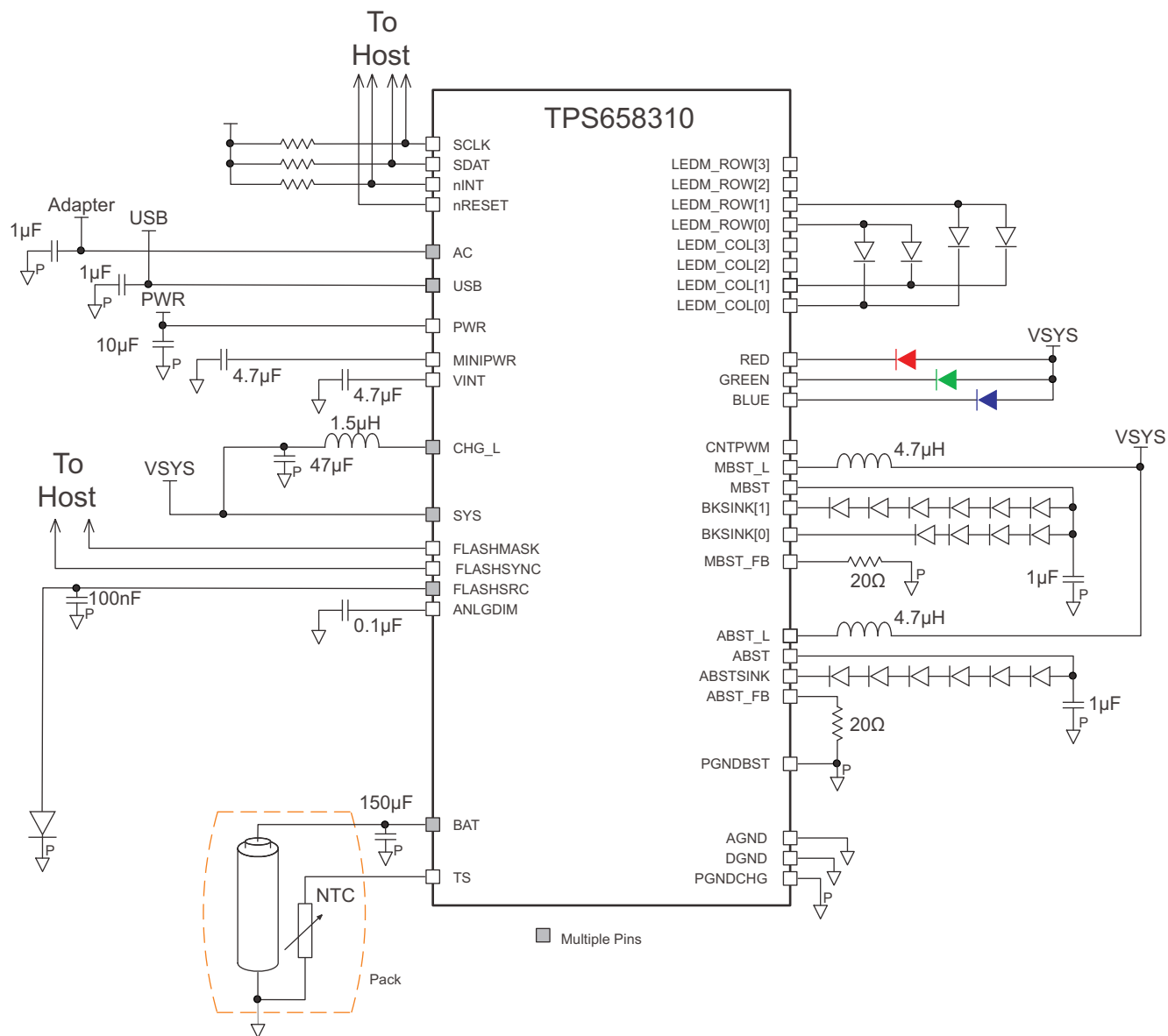


图 1-1. 经简化的系统图

2 Application Schematic



NOTE: Component values shown are the minimum required.

图 2-1. Application Schematic

PACKAGING INFORMATION

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead finish/ Ball material (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
TPS658310YFFR	ACTIVE	DSBGA	YFF	49	1500	RoHS & Green	SNAGCU	Level-1-260C-UNLIM	-40 to 85	TPS658310	Samples

(1) The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.

NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.

PREVIEW: Device has been announced but is not in production. Samples may or may not be available.

OBSELETE: TI has discontinued the production of the device.

(2) **RoHS:** TI defines "RoHS" to mean semiconductor products that are compliant with the current EU RoHS requirements for all 10 RoHS substances, including the requirement that RoHS substance do not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, "RoHS" products are suitable for use in specified lead-free processes. TI may reference these types of products as "Pb-Free".

RoHS Exempt: TI defines "RoHS Exempt" to mean products that contain lead but are compliant with EU RoHS pursuant to a specific EU RoHS exemption.

Green: TI defines "Green" to mean the content of Chlorine (Cl) and Bromine (Br) based flame retardants meet JS709B low halogen requirements of <=1000ppm threshold. Antimony trioxide based flame retardants must also meet the <=1000ppm threshold requirement.

(3) MSL, Peak Temp. - The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

(4) There may be additional marking, which relates to the logo, the lot trace code information, or the environmental category on the device.

(5) Multiple Device Markings will be inside parentheses. Only one Device Marking contained in parentheses and separated by a "-" will appear on a device. If a line is indented then it is a continuation of the previous line and the two combined represent the entire Device Marking for that device.

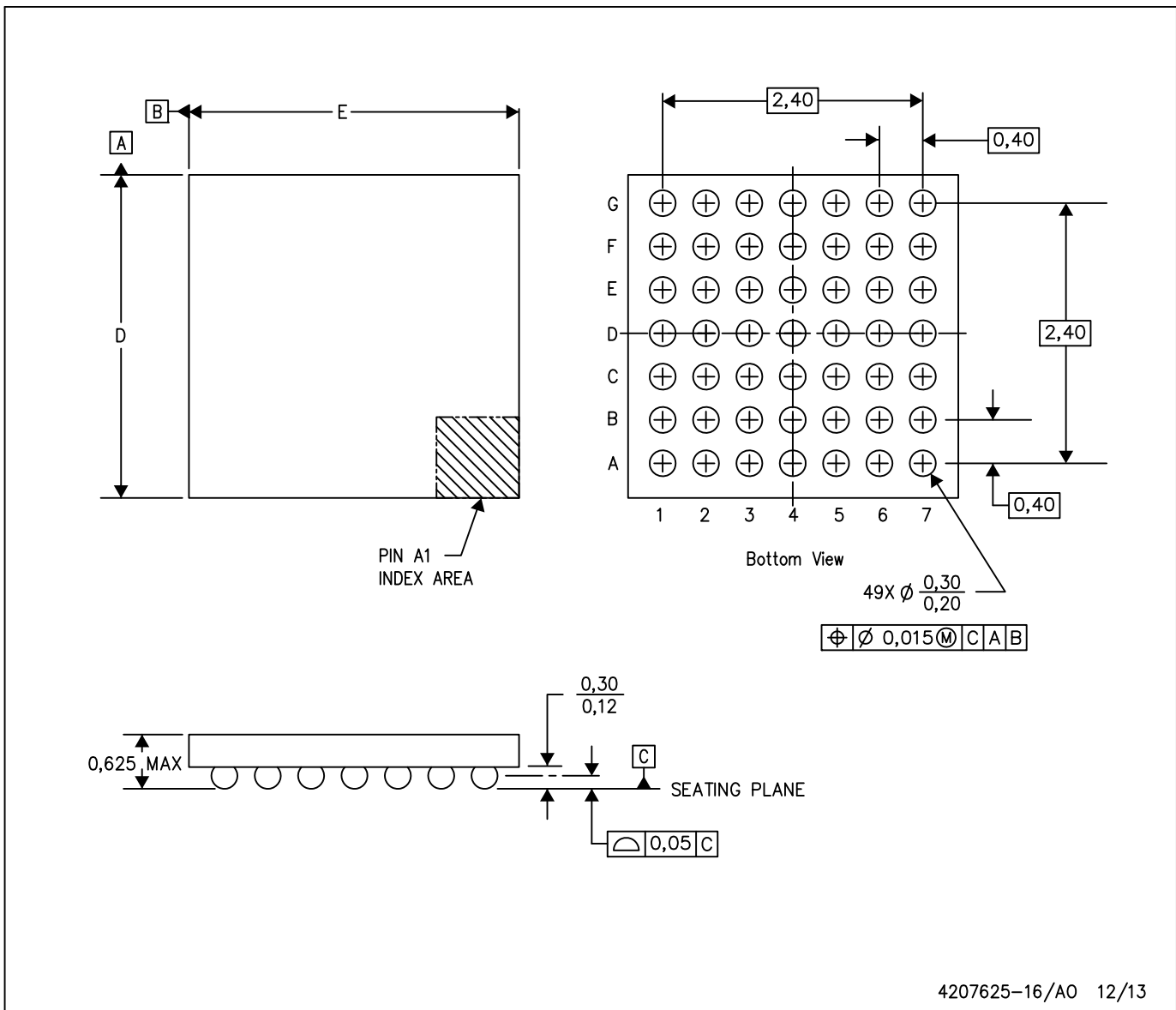
(6) Lead finish/Ball material - Orderable Devices may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead finish/Ball material values may wrap to two lines if the finish value exceeds the maximum column width.

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YFF (R-XBGA-N49)

DIE-SIZE BALL GRID ARRAY



- NOTES: A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 B. This drawing is subject to change without notice.
 C. NanoFree™ package configuration.

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