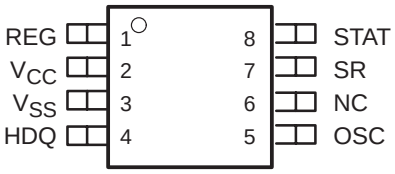
bq2019
ADVANCED BATTERY MONITOR IC

SLUS465 – SEPTEMBER 2000

- **Host Controller Multifunction Monitoring IC Designed to Work with An Intelligent Host Controller**
  - **– Provides State-of-Charge Information for Rechargeable Batteries**
  - **– Enhances Charge Termination**
- **High-Accuracy Coulometric Charge and Discharge Current Integration With Offset Calibration**
- **32 Bytes of General-Purpose Ram**
- **96 Bytes of Flash (Including 32 Bytes of Shadow Flash)**
- **8 Bytes of ID ROM**
- **Internal Temperature Sensor Eliminates the Need for An External Thermistor**
- **Multifunction Digital Output Port**
- **High-Accuracy Internal Timebase Eliminates External Crystal Oscillator**
- **Low Power Consumption**
  - **– Operating : <80 μA**
  - **– Sleep: <1.5 μA**
- **Single-Wire HDQ Serial Interface**
- **Packaging: 8-Lead TSSOP**

TSSOP
TS PACKAGE
(TOP VIEW)



PRODUCT PREVIEW

description

The bq2019 advanced battery-monitoring IC accurately measures the charge and discharge currents in a rechargeable battery pack. In pack integration, the bq2019 is the basis of a comprehensive battery-capacity management system in portable applications such as cellular phones, PDAs, or other portable products.

The bq2019 works with the host controller in the portable system to implement the battery management system. The host controller interprets the bq2019 data and communicates meaningful battery data to the end-user or power-management system.

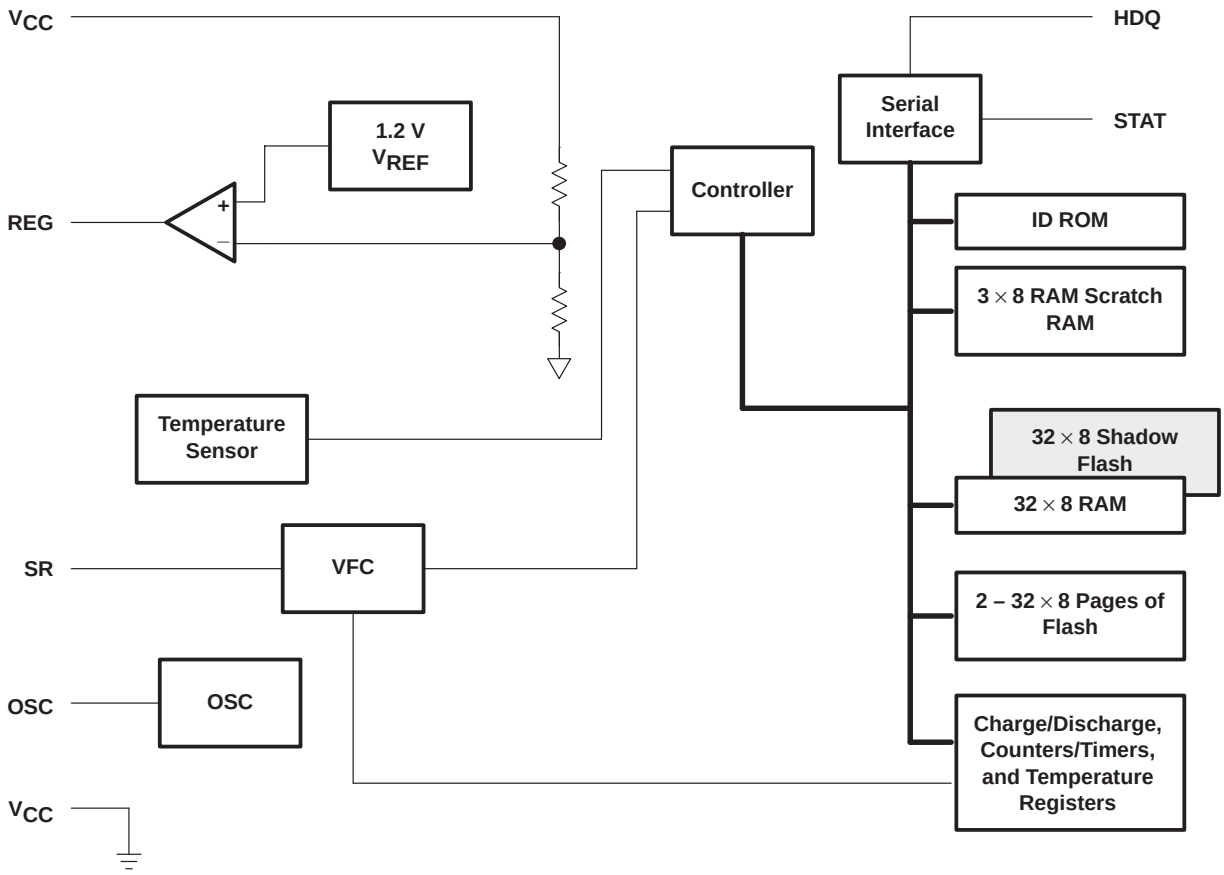
The bq2019 provides 64 bytes of general-purpose FLASH memory, 8 bytes of ID ROM, and 32 bytes of FLASH-backed RAM for data storage. The non-volatile memory can maintain formatted battery-monitor information, identification codes, warranty information, or other critical battery parameters when the battery is temporarily shorted or deeply discharged.

AVAILABLE OPTIONS

TOPR	PACKAGE
	8-Lead TSSOP (PW)
–20°C to 70°C	bq2019PW

Please be aware that an important notice concerning availability, standard warranty, and use in critical applications of Texas Instruments semiconductor products and disclaimers thereto appears at the end of this data sheet.

functional block diagram



PRODUCT PREVIEW

Terminal Functions

TERMINAL		I/O	DESCRIPTION
NAME	NO.		
REG	1	O	Regulator output
V_{CC}	2	I	Supply voltage
V_{SS}	3		Ground
HDQ	4	I/O	Single-wire HDQ interface
OSC	5	O	Time-base adjust for the oscillator
NC	6	I	Not connected
SR	7	I	Current-sense input
STAT	8	O	Open-drain status output

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