DALLAS
SEMICONDUCTOR

DS1830
Programmable MicroMonitor

FEATURES

- Halts and restarts an out–of–control microprocessor

- Holds microprocessor in check during power transients

- Automatically restarts microprocessor after power failure

- Monitors pushbutton for external override

- Major function parameters programmable through simple 3–wire interface, stored in nonvolatile memory

- Reset time programmable from 5 ms to 2.5 seconds

- Watchdog timeout programmable from 25 ms to 12.5 seconds

- Power trip points programmable 4.75V to 2.7V

- Pin compatible with the DS1232

- Low cost 8–pin DIP and 8–pin SOIC packages available

- Operating temperature of –40°C to +85°C

PIN ASSIGNMENT

$\overline{PBRST}$	1		8	V_{CC}
CS	2		7	$\overline{ST}$
CLK	3		6	$\overline{RST}$
GND	4		5	RST/DQ

DS1830 8–PIN DIP
(300 MIL)
See Mech. Drawing
Pg. 480

$\overline{PBRST}$	1		8	V_{CC}
CS	2		7	$\overline{ST}$
CLK	3		6	$\overline{RST}$
GND	4		5	RST/DQ

DS1830 8–PIN SOIC
(150 MIL)
See Mech. Drawing
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PIN DESCRIPTION

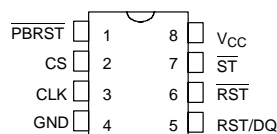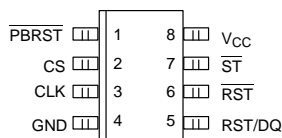|		
$\overline{PBRST}$	–	Pushbutton Reset Input
CS	–	Chip Select for Serial Port
CLK	–	Clock for Serial Port
GND	–	Ground
RST/DQ	–	Active High Reset Output/Serial Data Input
$\overline{RST}$	–	Active Low Reset Output
$\overline{ST}$	–	Strobe Input
V_{CC}	–	Power Supply

DESCRIPTION

The DS1830 Programmable MicroMonitor monitors three vital conditions for a microprocessor: power supply, software execution, and external override. All monitored parameters are programmable, with values stored in nonvolatile EPROM. This allows parameters such as reset time, watchdog timeout period, and power supply tolerance to be programmed into the device and tailored to the application circuit and microprocessor which is to be monitored.

In addition, the watchdog timer, reset, and pushbutton functions may be disabled via software. This allows maximum flexibility for use in new product development and system application testing.