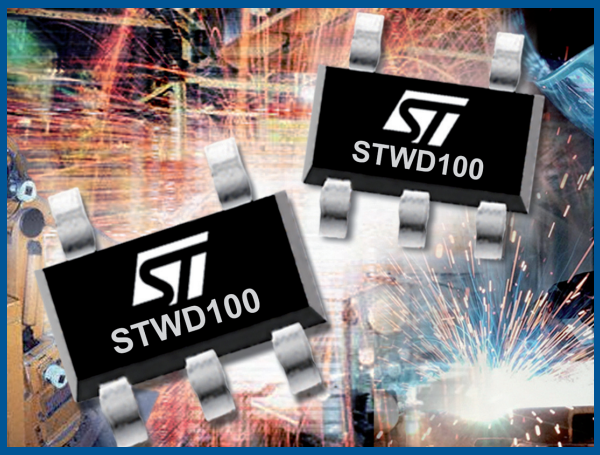
STWD100

Standalone watchdog with chip enable improves system reliability



The new STWD100 is a standalone watchdog circuit that improves system reliability by monitoring the system for software code execution errors. When the watchdog input detects a transitional edge, the internal watchdog timer clears and restarts, then begins counting again. If the watchdog timer exceeds the watchdog timeout period, the active-low output asserts for the watchdog pulse period to alert the system of a fault condition.
The STWD100 includes an active-low enable pin with a built-in pull-down resistor. This is important for momentarily disarming the device. Two examples of when this important feature is required are in-system programming and slow booting applications. When the enable pin is left unconnected (electrically floating), the part is enabled.

Key features

- Current consumption: 13 µA typ.
- Available watchdog timeout periods are 3.4 ms, 6.3 ms, 102 ms and 1.6 s
- Chip-enable input
- Open drain or push-pull watchdog output
- Operating temperature range: -40 to +125 °C
- Package SOT23-5, SC70-5 (SOT323-5)

Applications

- Telecommunications
- Alarm systems
- Industrial equipment
- Networking
- Medical equipment
- UPS

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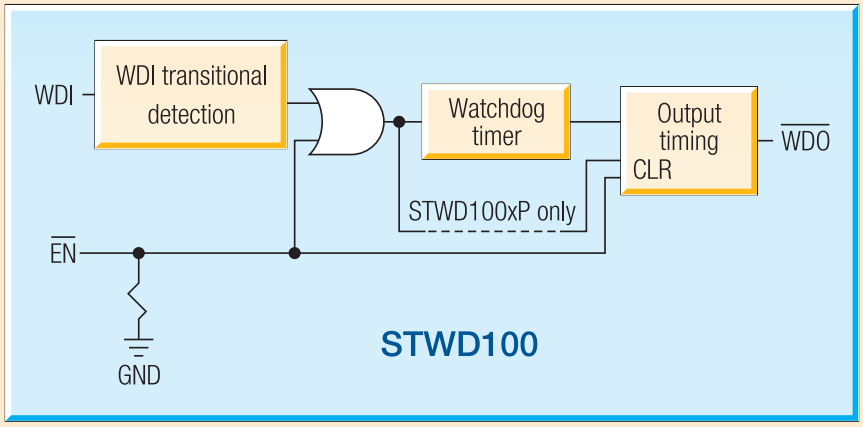
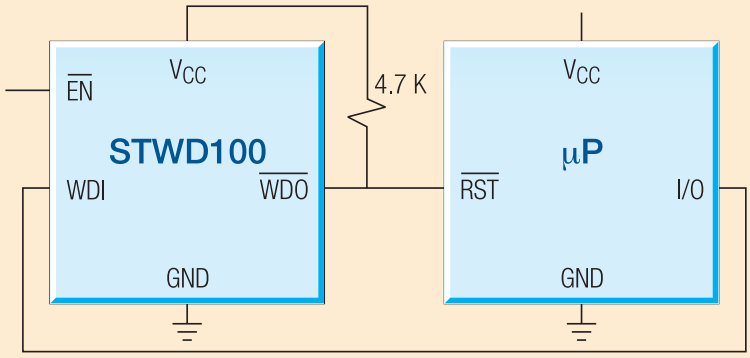
STWD100 block diagram



Typical application diagram



STWD100 product family

Part number	Watchdog timeout period		Output configuration
	t_{wd}	t_{pw}	
STWD100NPxx3F	3.4 ms	3.4 ms	Open drain
STWD100NWxx3F	6.3 ms	210 ms	Open drain
STWD100NXxx3F	102 ms	210 ms	Open drain
STWD100NYxx3F	1.6 s	210 ms	Open drain
STWD100PWxx3F	6.3 ms	210 ms	Push-pull
STWD100PXxx3F	102 ms	210 ms	Push-pull
STWD100PYxx3F	1.6 s	210 ms	Push-pull

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