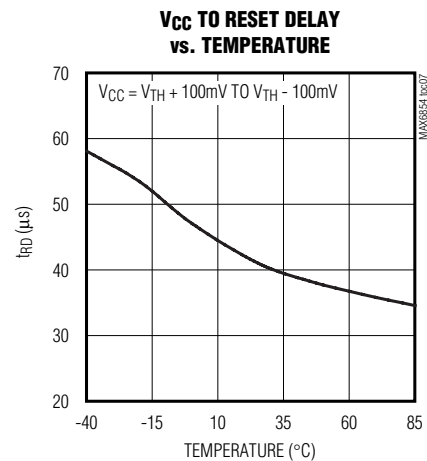
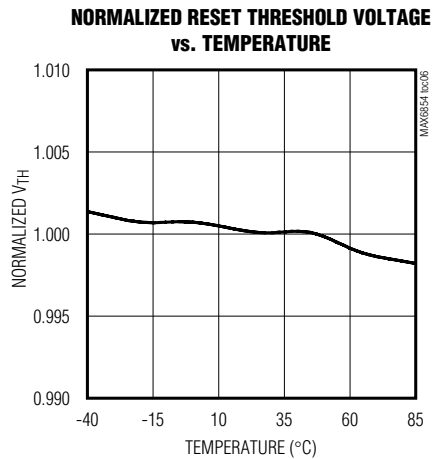
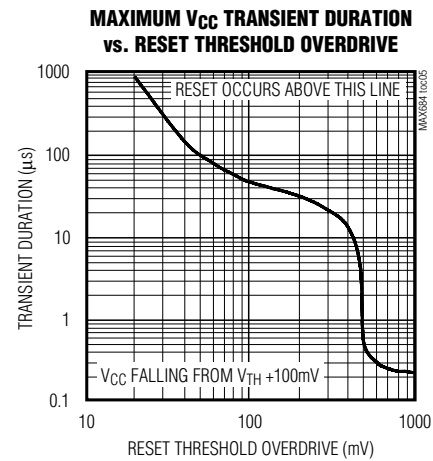
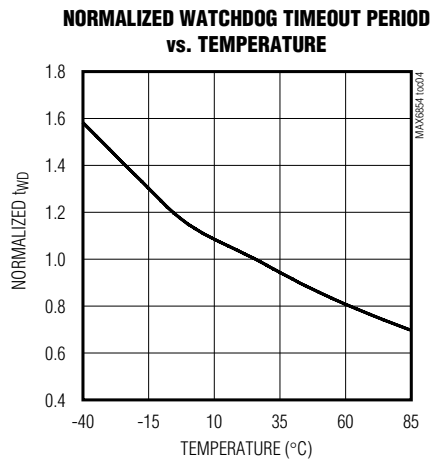
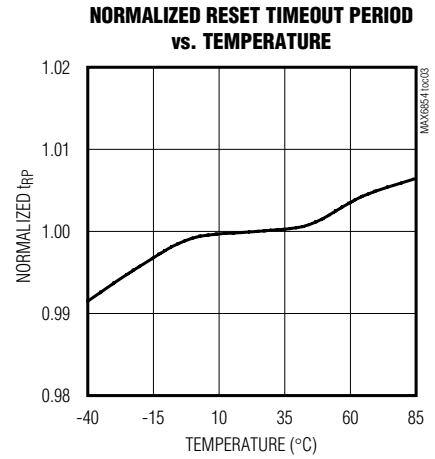
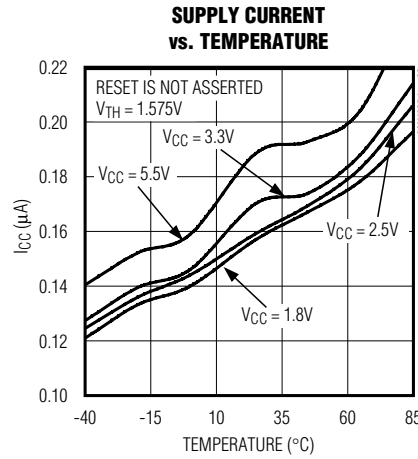
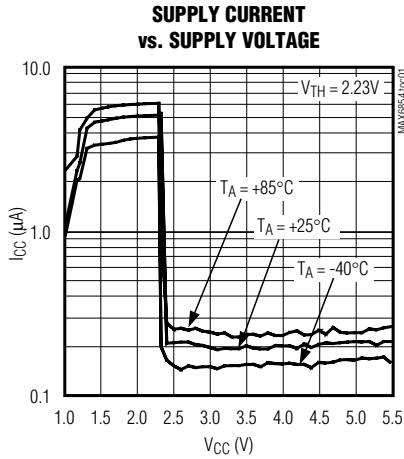


Nanopower μ P Supervisory Circuits with Manual Reset and Watchdog Timer

Typical Operating Characteristics

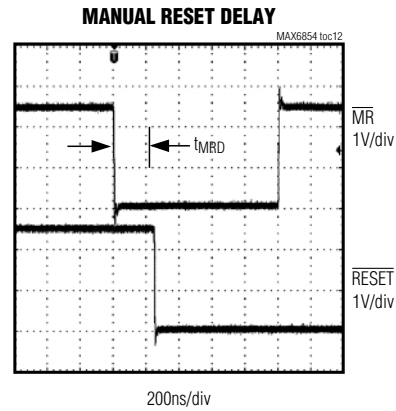
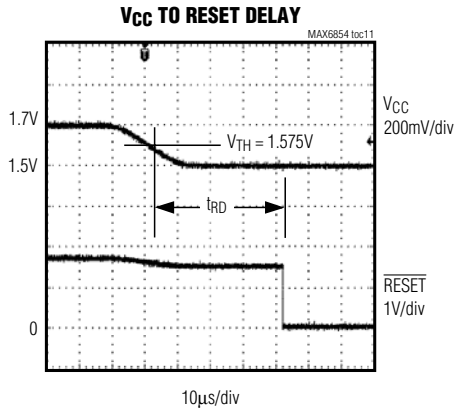
($V_{CC} = +2.5V$, $T_A = +25^\circ C$, unless otherwise noted.)



Nanopower μ P Supervisory Circuits with Manual Reset and Watchdog Timer

Typical Operating Characteristics (continued)

($V_{CC} = +2.5V$, $T_A = +25^\circ C$, unless otherwise noted.)



Nanopower μ P Supervisory Circuits with Manual Reset and Watchdog Timer

MAX6854/MAX6855/MAX6856 Pin Description

PIN		NAME	FUNCTION
MAX6854/ MAX6856	MAX6855		
1	—	$\overline{\text{RESET}}$	Active-Low Open-Drain or Push-Pull Reset Output. $\overline{\text{RESET}}$ transitions from high to low when V_{CC} drops below the selected reset threshold or $\overline{\text{MR}}$ is pulled low. $\overline{\text{RESET}}$ remains low for the reset timeout period after V_{CC} exceeds the device reset threshold and $\overline{\text{MR}}$ deasserts. Push-pull $\overline{\text{RESET}}$ outputs are referenced to V_{CC} . Open-drain $\overline{\text{RESET}}$ outputs require an external pullup resistor.
2, 4	2, 4	GND	Ground. Connect all GND inputs to the same potential.
3	3	$\overline{\text{MR}}$	Active-Low Manual Reset Input. Drive $\overline{\text{MR}}$ low to initiate a reset. The reset output remains asserted while $\overline{\text{MR}}$ is held low and for the reset timeout period after $\overline{\text{MR}}$ transitions high. Leave $\overline{\text{MR}}$ unconnected or connect to V_{CC} if unused. $\overline{\text{MR}}$ is internally pulled up to V_{CC} through 10k Ω .
5	5	V_{CC}	Supply Voltage. Input for V_{CC} reset monitor. For noisy systems, bypass V_{CC} with a 0.1 μ F capacitor to GND.
—	1	RESET	Active-High Push-Pull Reset Output. RESET transitions from low to high when V_{CC} drops below the selected reset threshold or $\overline{\text{MR}}$ is pulled low. RESET remains high for the reset timeout period after V_{CC} exceeds the device reset threshold and $\overline{\text{MR}}$ deasserts. RESET is referenced to V_{CC} .

MAX6858/MAX6860 Pin Description

PIN	NAME	FUNCTION
MAX6858/ MAX6860		
1, 2	I.C.	Internally Connected. For increased noise immunity, connect I.C. to GND.
3	GND	Ground
4	$\overline{\text{RESET}}$	Active-Low Open-Drain or Push-Pull Reset Output. $\overline{\text{RESET}}$ transitions from high to low when V_{CC} drops below the selected reset threshold. $\overline{\text{RESET}}$ remains low for the reset timeout period after V_{CC} exceeds the device reset threshold. Push-pull $\overline{\text{RESET}}$ outputs are referenced to V_{CC} . Open-drain $\overline{\text{RESET}}$ outputs require an external pullup resistor.
5	V_{CC}	Supply Voltage. Input for V_{CC} reset monitor. For noisy systems, bypass V_{CC} with a 0.1 μ F capacitor to GND.

Nanopower μ P Supervisory Circuits with Manual Reset and Watchdog Timer

MAX6861/MAX6862/MAX6863 Pin Description

PIN		NAME	FUNCTION
MAX6861/ MAX6863	MAX6862		
1	1	CT	Reset Timeout Select Input. Connect CT low to select the D1 reset timeout output period (see Tables 1 and 4). Connect CT high (normally V _{CC}) to select the D3 reset timeout period.
2	2	GND	Ground
3	3	$\overline{\text{MR}}$	Active-Low Manual Reset Input. Drive $\overline{\text{MR}}$ low to initiate a reset. The reset output remains asserted while $\overline{\text{MR}}$ is held low and for the reset timeout period after $\overline{\text{MR}}$ transitions high. Leave $\overline{\text{MR}}$ unconnected or connect to V _{CC} if unused. $\overline{\text{MR}}$ is internally pulled up to V _{CC} through 10k Ω .
4	—	$\overline{\text{RESET}}$	Active-Low Open-Drain or Push-Pull Reset Output. $\overline{\text{RESET}}$ transitions from high to low when V _{CC} drops below the selected reset threshold or $\overline{\text{MR}}$ is pulled low. $\overline{\text{RESET}}$ remains low for the reset timeout period after V _{CC} exceeds the device reset threshold and $\overline{\text{MR}}$ deasserts. Push-pull $\overline{\text{RESET}}$ outputs are referenced to V _{CC} . Open-drain $\overline{\text{RESET}}$ outputs require an external pullup resistor.
5	5	V _{CC}	Supply Voltage. Input for V _{CC} reset monitor. For noisy systems, bypass V _{CC} with a 0.1 μ F capacitor to GND.
—	4	RESET	Active-High Push-Pull Reset Output. RESET transitions from low to high when V _{CC} drops below the selected reset threshold or $\overline{\text{MR}}$ is pulled low. RESET remains high for the reset timeout period after V _{CC} exceeds the device reset threshold and $\overline{\text{MR}}$ deasserts. RESET is referenced to V _{CC} .

MAX6854/MAX6855/MAX6856/MAX6858/MAX6860-MAX6869

Nanopower μ P Supervisory Circuits with Manual Reset and Watchdog Timer

MAX6864/MAX6865/MAX6866 Pin Description

PIN		NAME	FUNCTION
MAX6864/ MAX6866	MAX6865		
1	—	$\overline{\text{RESET}}$	Active-Low Open-Drain or Push-Pull Reset Output. $\overline{\text{RESET}}$ transitions from high to low when V_{CC} drops below the selected reset threshold, $\overline{\text{MR}}$ is pulled low, or the watchdog timer expires. $\overline{\text{RESET}}$ remains low for the reset timeout period after V_{CC} exceeds the device reset threshold, $\overline{\text{MR}}$ deasserts, or after the watchdog timer expires. Push-pull $\overline{\text{RESET}}$ outputs are referenced to V_{CC} . Open-drain $\overline{\text{RESET}}$ outputs require an external pullup resistor.
2	2	GND	Ground
3	3	$\overline{\text{MR}}$	Active-Low Manual Reset Input. Drive $\overline{\text{MR}}$ low to initiate a reset. The reset output remains asserted while $\overline{\text{MR}}$ is held low and for the reset timeout period after $\overline{\text{MR}}$ transitions high. Leave $\overline{\text{MR}}$ unconnected or connect to V_{CC} if unused. $\overline{\text{MR}}$ is internally pulled up to V_{CC} through 10k Ω .
4	4	WDI	Watchdog Input. If WDI remains high or low for longer than the watchdog timeout period, the internal watchdog timer expires, and a reset is triggered for the reset timeout period. The internal watchdog timer clears whenever reset is asserted, the manual reset is asserted, or WDI sees a rising or falling edge.
5	5	V_{CC}	Supply Voltage. Input for V_{CC} reset monitor. For noisy systems, bypass V_{CC} with a 0.1 μ F capacitor to GND.
—	1	RESET	Active-High Push-Pull Reset Output. RESET transitions from low to high when V_{CC} drops below the selected reset threshold, $\overline{\text{MR}}$ is pulled low, or the watchdog timer expires. RESET remains high for the reset timeout period after V_{CC} exceeds the device reset threshold, $\overline{\text{MR}}$ deasserts, or after the watchdog timer expires. RESET is referenced to V_{CC} .

Nanopower μ P Supervisory Circuits with Manual Reset and Watchdog Timer

MAX6867/MAX6868/MAX6869 Pin Description

PIN		NAME	FUNCTION
MAX6867/ MAX6869	MAX6868		
1	1	WDI	Watchdog Input. If WDI remains high or low for longer than the watchdog timeout period, the internal watchdog timer expires, and a reset is triggered for the reset timeout period. The internal watchdog timer clears whenever reset is asserted, the manual reset is asserted, or WDI sees a rising or falling edge.
2	2	GND	Ground
3	3	$\overline{\text{MR}}$	Active-Low Manual Reset Input. Drive $\overline{\text{MR}}$ low to initiate a reset. The reset output remains asserted while $\overline{\text{MR}}$ is held low and for the reset timeout period after $\overline{\text{MR}}$ transitions high. Leave $\overline{\text{MR}}$ unconnected or connect to V_{CC} if unused. $\overline{\text{MR}}$ is internally pulled up to V_{CC} through 10k Ω .
4	—	$\overline{\text{RESET}}$	Active-Low Open-Drain or Push-Pull Reset Output. $\overline{\text{RESET}}$ transitions from high to low when V_{CC} drops below the selected reset threshold, $\overline{\text{MR}}$ is pulled low, or the watchdog timer expires. $\overline{\text{RESET}}$ remains low for the reset timeout period after V_{CC} exceeds the device reset threshold, $\overline{\text{MR}}$ deasserts, or after the watchdog timer expires. Push-pull $\overline{\text{RESET}}$ outputs are referenced to V_{CC} . Open-drain $\overline{\text{RESET}}$ outputs require an external pullup resistor.
5	5	V_{CC}	Supply Voltage. Input for V_{CC} reset monitor. For noisy systems, bypass V_{CC} with a 0.1 μ F capacitor to GND.
—	4	RESET	Active-High Push-Pull Reset Output. RESET transitions from low to high when V_{CC} drops below the selected reset threshold, $\overline{\text{MR}}$ is pulled low, or the watchdog timer expires. RESET remains high for the reset timeout period after V_{CC} exceeds the device reset threshold, $\overline{\text{MR}}$ deasserts, or after the watchdog timer expires. RESET is referenced to V_{CC} .

MAX6854/MAX6855/MAX6856/MAX6858/MAX6860-MAX6869

Nanopower μ P Supervisory Circuits with Manual Reset and Watchdog Timer



Figure 1. Functional Diagram

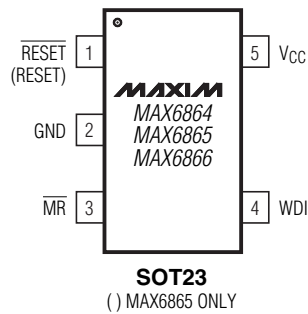


Figure 2. $\overline{RESET}$ Timing Relationship

Nanopower μ P Supervisory Circuits with Manual Reset and Watchdog Timer

Pin Configurations

TOP VIEW



MAX6854/MAX6855/MAX6856/MAX6858/MAX6860-MAX6869

Nanopower μ P Supervisory Circuits with Manual Reset and Watchdog Timer

Selector Guide

PART	RESET OUTPUT			$\overline{\text{MR}}$	WDI	CT
	PUSH-PULL ACTIVE LOW	PUSH-PULL ACTIVE HIGH	OPEN-DRAIN ACTIVE LOW			
MAX6854	✓	—	—	✓	—	—
MAX6855	—	✓	—	✓	—	—
MAX6856	—	—	✓	✓	—	—
MAX6858	✓	—	—	—	—	—
MAX6860	—	—	✓	—	—	—
MAX6861	✓	—	—	✓	—	✓
MAX6862	—	✓	—	✓	—	✓
MAX6863	—	—	✓	✓	—	✓
MAX6864	✓	—	—	✓	✓	—
MAX6865	—	✓	—	✓	✓	—
MAX6866	—	—	✓	✓	✓	—
MAX6867	✓	—	—	✓	✓	—
MAX6868	—	✓	—	✓	✓	—
MAX6869	—	—	✓	✓	✓	—

Chip Information

TRANSISTOR COUNT: 2848

PROCESS: BiCMOS

