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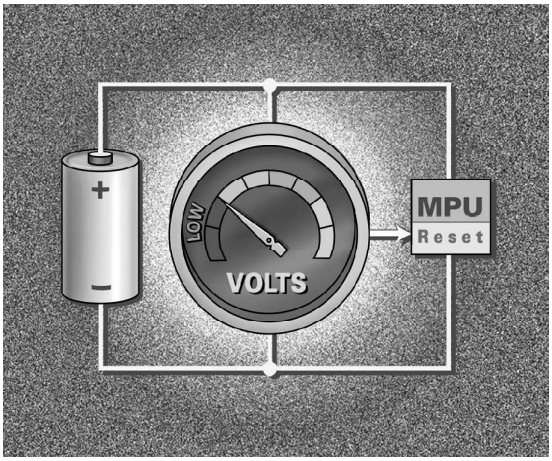
Information Brief



MC33464 Series
MC33465 Series
Micropower
CMOS Undervoltage Sensing Circuits

The MC33464/33465 families of micropower undervoltage sensing ICs are designed for direct monitoring of MPU/logic power supplies in portable, appliance, automotive and industrial equipment. Both series are available with threshold voltages of 0.9, 2.0, 2.7, 3.0 and 4.5 V with a choice of open drain or complementary CMOS reset output configurations. The MC33464 family has a low quiescent current of 0.8 μA and is available in SOT-23 or SOT-89 packages. The MC33465 series adds a programmable time delayed output, has a quiescent current of 1.0 μA, and is packaged in a SOT-23.

The MC33464 series features a highly accurate voltage reference, a comparator with precise thresholds and built-in hysteresis to prevent erratic reset operation, a choice of output configurations of either open drain or complementary MOS, and guaranteed operation below 1.0 volt with extremely low standby current.

The MC33465 series of voltage detectors offers the same features as the MC33464 series with the addition of a time delayed output which can be programmed by the system designer. These devices are available in a SOT-23, 5-pin plastic surface mount package.

FEATURES

- Ultra-low supply current (capable of being driven by a single battery)
- Broad operating voltage range: 0.7V to 10.0V (at 25°C)
- Additional detector thresholds (can make available settings of 0.1V steps within the range of 0.9V to 6.0V)
- Highly accurate detector threshold: ± 2.5%
- Low temperature drift vs. detector threshold: ±100ppm / °C
- Output time delay: 100ms with Cx = 0.15µF (MC33465 series only)
- N-channel open drain and CMOS reset output options
- Convenient SOT-89 and SOT-23 packages
- Wide operating temperature range: T_A = –30°C to +80°C

TYPES OF APPLICATIONS

- Direct monitoring of MPU / logic power supplies in portable, appliance, automotive and industrial equipment.
- Power failure detector
- Battery back-up circuit
- Battery checker
- Wave shaping circuit
- Window comparator

BENEFITS TO YOU

- Extended battery life for low-voltage powered microprocessor-based systems due to low current drain.
- Fewer batteries required (single battery capability) with ultra-low supply current.
- Improved system performance with highly accurate threshold voltages.
- Reduced printed circuit board space with subminiature SOT-23 and SOT-89 surface mount packages.

A SOLUTION FOR THESE QUESTIONS

- Is a longer battery life important to you?
- Do you need ultra-low quiescent bias current and need to monitor a wide range of supply voltages?
- Does your design require a highly accurate detector threshold?
- Does your portable product design require very small footprints to minimize PC board area?

ORDERING INFORMATION

Device	Threshold Voltage	Reset Output Type	Quiescent Current & Output Delay*	Operating Temperature Range	Package
MC33464H-09AT1	0.9 V	Open Drain Reset	0.8 µA	T_A = –30°C to +80°C	SOT-89
MC33464H-20AT1	2.0 V				
MC33464H-27AT1	2.7 V				
MC33464H-30AT1	3.0 V				
MC33464H-45AT1	4.5 V				
MC33464H-09CT1	0.9 V	CMOS Reset			
MC33464H-20CT1	2.0 V				
MC33464H-27CT1	2.7 V				
MC33464H-30CT1	3.0 V				
MC33464H-45CT1	4.5 V				
MC33464N-09ATR	0.9 V	Open Drain Reset			SOT-23
MC33464N-20ATR	2.0 V				
MC33464N-27ATR	2.7 V				
MC33464N-30ATR	3.0 V				
MC33464N-45ATR	4.5 V				
MC33464N-09CTR	0.9 V	CMOS Reset			
MC33464N-20CTR	2.0 V				
MC33464N-27CTR	2.7 V				
MC33464N-30CTR	3.0 V				
MC33464N-45CTR	4.5 V				
MC33465N-09ATR	0.9 V	Open Drain Reset	1.0 µA*		SOT-23
MC33465N-20ATR	2.0 V				
MC33465N-27ATR	2.7 V				
MC33465N-30ATR	3.0 V				
MC33465N-45ATR	4.5 V				
MC33465N-09CTR	0.9 V	CMOS Reset			
MC33465N-20CTR	2.0 V				
MC33465N-27CTR	2.7 V				
MC33465N-30CTR	3.0 V				
MC33465N-45CTR	4.5 V				

*Quiescent current of 1.0 mA with a programmable time delayed output.

LITERATURE

Data sheets containing full specifications, parametric curves and extensive applications information are available from Motorola LDC as MC33464/D and MC33465/D.

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