

Processor Supervisor 4.55V 1 Active Low 8-Pin SOIC Tube



Images are for reference only

[Inquiry](#)

Manufacturer: [Texas Instruments, Inc](#)

Package/Case: SOP8

Product Type: Power Management ICs

RoHS: RoHS Compliant/Lead free 

Lifecycle: Active

General Description

The TLC77xx family of micropower supply voltage supervisors provide reset control, primarily in microcomputer and microprocessor systems.

During power-on, RESET is asserted when VDD reaches 1 V. After minimum VDD (≥ 2 V) is established, the circuit monitors SENSE voltage and keeps the reset outputs active as long as SENSE voltage (VI(SENSE)) remains below the threshold voltage. An internal timer delays return of the output to the inactive state to ensure proper system reset. The delay time, t_d , is determined by an external capacitor:

$$t_d = 2.1 \times 10^4 \times C_T$$

Where

C_T is in farad t_d is in seconds

Except for the TLC7701, which can be customized with two external resistors, each supervisor has a fixed sense threshold voltage set by an internal voltage divider. When SENSE voltage drops below the threshold voltage, the outputs become active and stay in that state until SENSE voltage returns above threshold voltage and the delay time, t_d , has expired.

In addition to the power-on-reset and undervoltage-supervisor function, the TLC77xx adds power-down control support for static RAM. When CONTROL is tied to GND, RESET will act as active high. The voltage monitor contains additional logic intended for control of static memories with battery backup during power failure. By driving the chip select (CS) of the memory circuit with the RESET output of the TLC77xx and with the CONTROL driven by the memory bank select signal (CSH1) of the microprocessor, the memory circuit is automatically disabled during a power loss. (In this application the TLC77xx power has to be supplied by the battery.)

The TLC77xxI is characterized for operation over a temperature range of -40°C to 85°C ; the TLC77xxQ is characterized for operation over a temperature range of -40°C to 125°C ; and the TLC77xxM is characterized for operation over the full Military temperature range of -55°C to 125°C .

The 3×3 mm DRB package is also available as a non-magnetic package for medical imaging application.

Key Features

Power-On Reset Generator

Automatic Reset Generation After Voltage Drop

Precision Voltage Sensor

Temperature-Compensated Voltage Reference

Programmable Delay Time by External Capacitor

Supply Voltage Range . . . 2 V to 6 V

Defined RESET Output from VDD \geq 1 V

Power-Down Control Support for Static RAM With Battery Backup

Maximum Supply Current of 16 μ A

Power Saving Totem-Pole Outputs

Temperature Range . . . Up to -55°C to 125°C

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Recommended For You

TL2843P

Texas Instruments, Inc

DIP8

TL431CP

Texas Instruments, Inc

DIP8

TL7705ACDR

Texas Instruments, Inc

SOP8

TL3843P

Texas Instruments, Inc

DIP8

TL497ACN

Texas Instruments, Inc

DIP14

TL3845P

Texas Instruments, Inc

DIP8

TL494CD

Texas Instruments, Inc

SOP-16

TL431HDBVR

Texas Instruments, Inc

SOT23-5

TL494CN

Texas Instruments, Inc

DIP

TL431CDBVR

Texas Instruments, Inc

SOT23-5

TL7705ACP

Texas Instruments, Inc

DIP8

TL3842P

Texas Instruments, Inc

DIP8

TLV73325PDBVT

Texas Instruments, Inc

SOT23-5

TLV73333PDBVR

Texas Instruments, Inc

SOT23-5

TL431BIDBZT

Texas Instruments, Inc

SOT23-3