

查询SP730供应商



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SP730

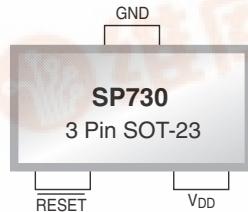
Microprocessor Supervisory Circuit with Pull Up Resistor

FEATURES

- Holds Microcontroller in Reset
- Reset Microcontroller during power loss
- 4.375 Voltage Trip Point
- Active Low RESET Pin
- Internal Pull-up Resistor
- Holds RESET for 350ms (typical)
- RESET valid down to V_{DD} 1.0V
- 45 μ A Typical Operating Current
- Offered in a 3 Pin SOT-23 Package

APPLICATIONS

- Portable Electronic Devices
- Electrical Power Meter
- Computer System Board
- Modem

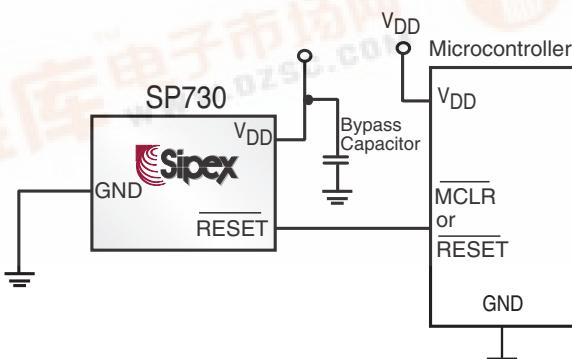


Now Available in Lead Free Packaging

DESCRIPTION

The SP730 is a voltage supervisory device designed to keep a microcontroller in reset until the system voltage has reached the proper level and stabilized. It also operates as protection from brown-out conditions when the supply voltage drops below a safe operating level. The SP730 has an internal 5k pull-up resistor. The device has an active low RESET pin and will assert the RESET signal whenever the voltage on the V_{DD} pin is below the trip-point voltage. The part is available in a small 3 pin SOT-23 package. Contact factory for other trip voltage options.

TYPICAL APPLICATION CIRCUIT



ABSOLUTE MAXIMUM RATINGS

| | | |
|---|-------------------------|------|
| V_{DD} | | 6.0V |
| All inputs and outputs w.r.t. GND | -0.6 to V_{DD} + 1.0V | |
| Storage Temperature | -65°C to +150°C | |
| Ambient Temperature with power applied..... | -65°C to +125°C | |

ESD Protection on all pins ≥2kV

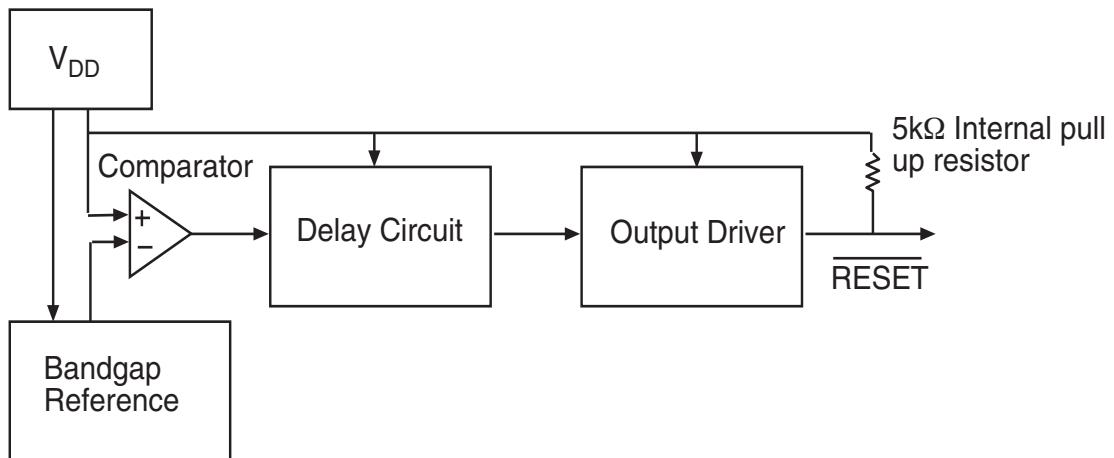
These are stress ratings only and functional operation of the device at these ratings or any other above those indicated in the operation sections of the specifications below is not implied. Exposure to absolute maximum rating conditions for extended periods of time may affect reliability.

ELECTRICAL CHARACTERISTICS

V_{DD} = 1.0V - 5.5V ; -40°C to 85°C. The ♦ denotes the specifications which apply over the full operating temperature range, unless otherwise specified.

| Parameter | Symbol | Min. | Typ. | Max. | | Units | Conditions |
|--|-------------|-------------|-------|------|---|-------|--|
| Operating Voltage Range | V_{DD} | 1.0 | | 5.5 | ♦ | V | |
| V_{DD} Value to <u>RESET</u> | V_{DDMIN} | 1.0 | | | ♦ | V | |
| Operating Current | I_{DD} | | 45 | 60 | ♦ | µA | V_{DD} = 5.5V (no load) |
| V_{DD} Trip Point | V_{TRIP} | 4.25 | 4.375 | 4.50 | ♦ | V | |
| Threshold Hysteresis | V_{HYS} | | 50 | | ♦ | mV | |
| RESET Low Level Output Voltage | V_{OL} | | | 0.6 | ♦ | V | I_{OL} = 8.5mA, V_{DD} = $V_{TRIP MIN}$ |
| RESET High Level Output Voltage | V_{OH} | $V_{DD}-.7$ | | | ♦ | V | I_{OH} = 50µA, $V_{DD} > V_{TRIP MAX}$ |
| Pull up Resistor | | | 5 | | ♦ | K | |
| V_{DD} Detect to <u>RESET</u> Inactive | t_{RPU} | 150 | 350 | 700 | ♦ | ms | |
| V_{DD} Detect to <u>RESET</u> | t_{RPD} | | 10 | | ♦ | µS | V_{DD} ramped from $V_{TRIP MAX}$ ($V_{TRIP MAX} + 250mV$) to ($V_{TRIP MIN} - 250mV$) |

FUNCTIONAL DIAGRAM



TIMING DIAGRAM

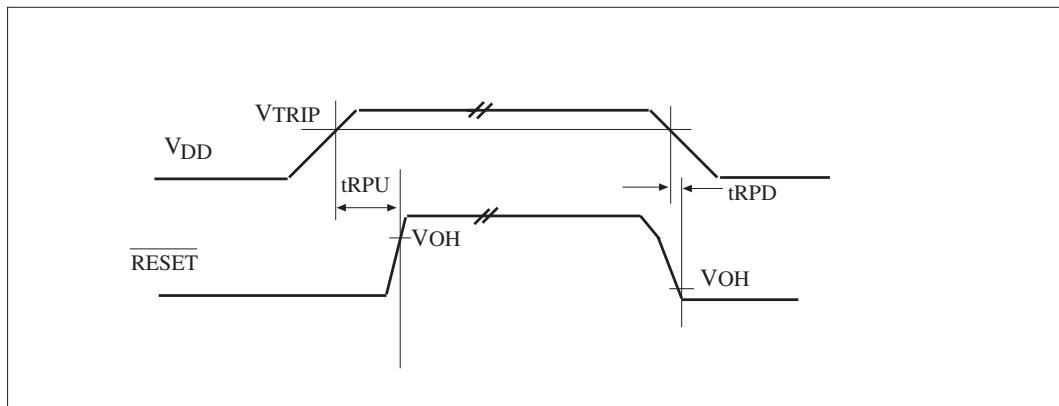
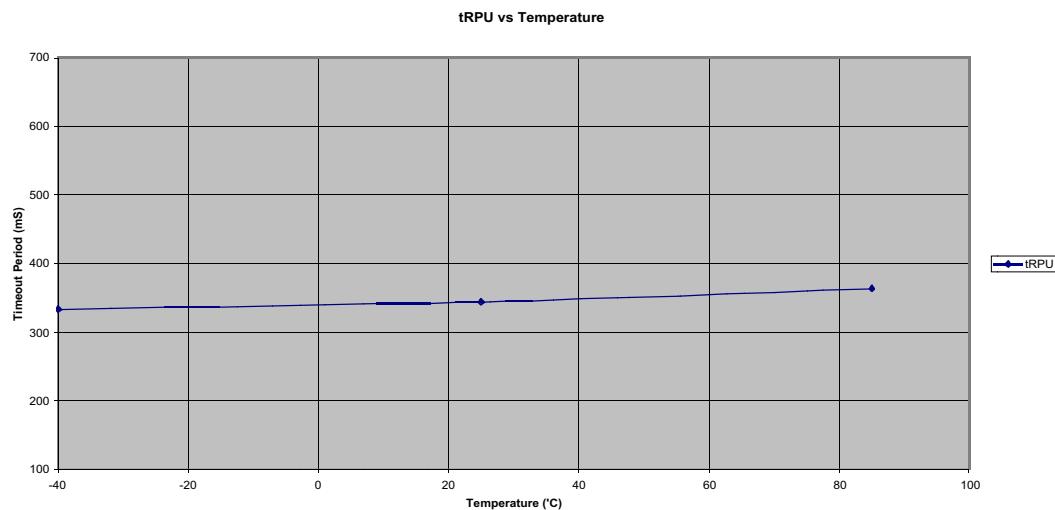
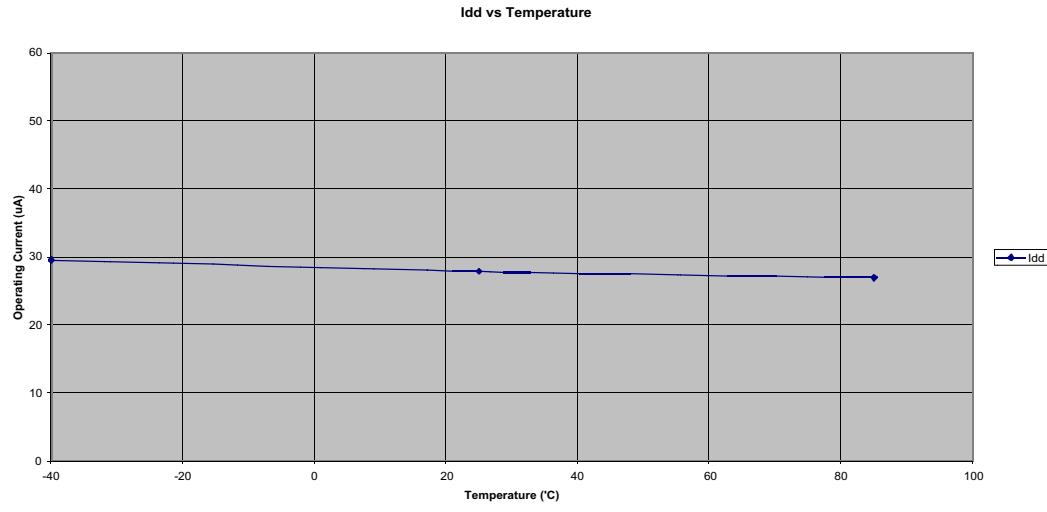


Figure 1: SP730 Timing Diagram

PIN DESCRIPTION

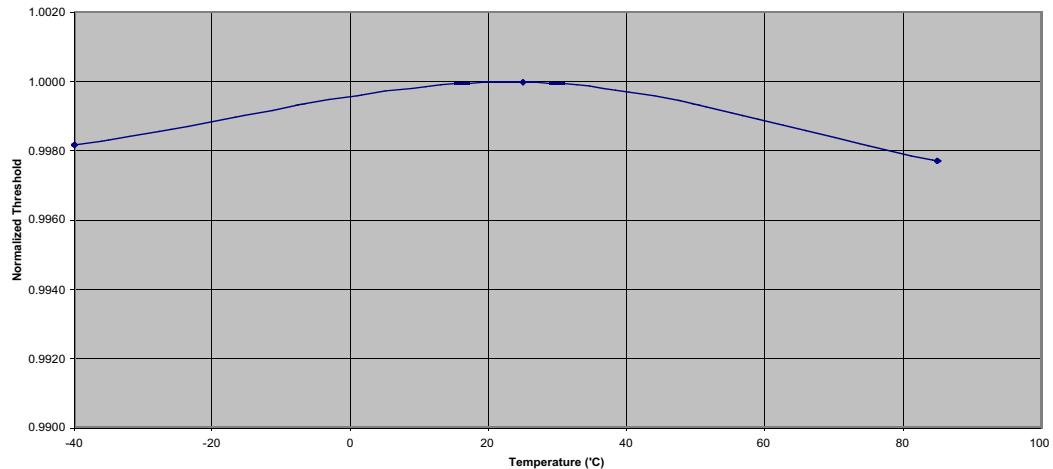
| PIN NUMBER | PIN NAME | 3 PIN SOT-23 DESCRIPTION |
|------------|-----------------|---|
| 1 | RESET | Active Low. This pin goes low whenever V_{DD} falls below the reset threshold. |
| 2 | V _{DD} | Supply input. |
| 3 | GND | Ground. |

TYPICAL PERFORMANCE CHARACTERISTICS

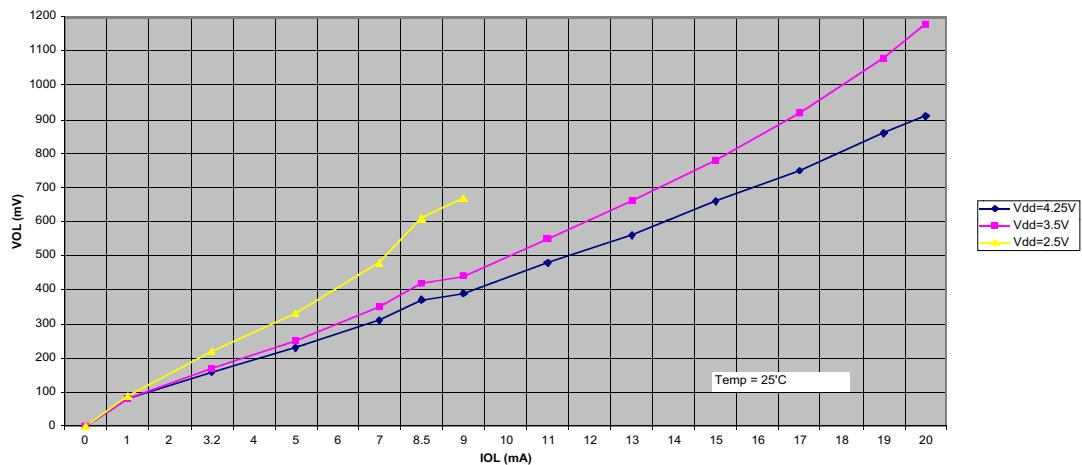


TYPICAL PERFORMANCE CHARACTERISTICS

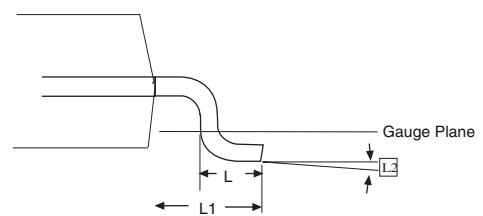
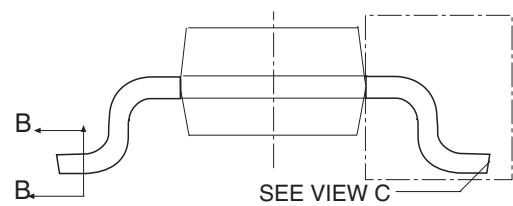
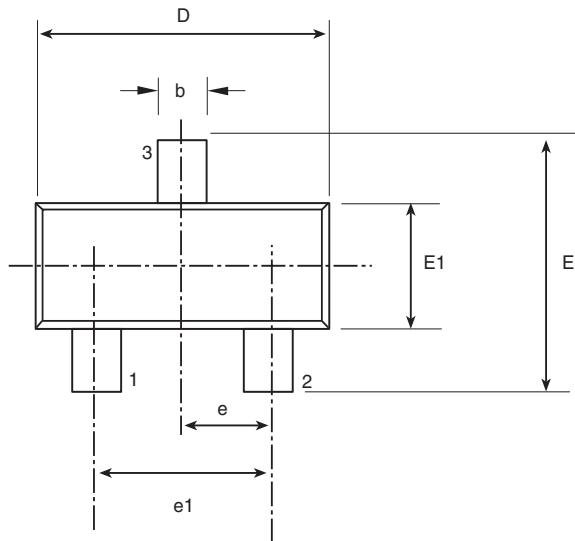
Normalized VTRIP vs Temperature



VOL vs IOL

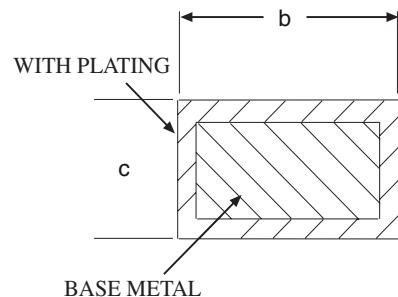
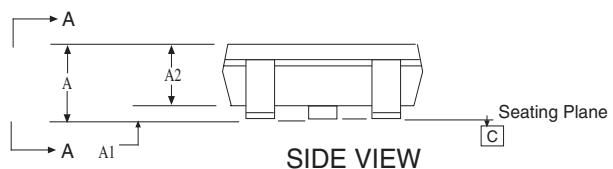


3 PIN SOT-23



VIEW C

| Dimensions in (mm) | 3 PIN SOT-23 JEDEC TO-236 (AB) Variation | | |
|--------------------|--|------|------|
| | MIN | NOM | MAX |
| A | 0.89 | - | 1.12 |
| A1 | 0.01 | - | 0.10 |
| A2 | 0.88 | .95 | 1.02 |
| b | 0.30 | - | 0.50 |
| c | 0.08 | - | 0.20 |
| D | 2.80 | 2.90 | 3.04 |
| E | 2.10 | - | 2.64 |
| E1 | 1.20 | 1.30 | 1.40 |
| L | 0.30 | 0.45 | 0.60 |
| L1 | 0.54 REF | | |
| Ø | 0° | - | 8° |



3 PIN SOT-23

ORDERING INFORMATION

| Part number | Top Mark | Temperature | Package |
|-----------------------|-----------|---------------|--------------|
| SP730EK-4.375..... | V3WW..... | -40°-85°..... | 3 Pin SOT-23 |
| SP730EK-4.375/TR..... | V3WW..... | -40°-85°..... | 3 Pin SOT-23 |

Contact factory for other trip voltage options.

Available in lead free packaging. To order add "L" suffix to part number.

Example: SP730EK-4.375/TR = standard; SP730EK-4.375-L/TR = lead free

/TR = Tape and Reel

Pack quantity is 2500 for SOT-23.



ANALOG EXCELLENCE

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