



Reset, Low Voltage Detector Built-in Delay 200ms

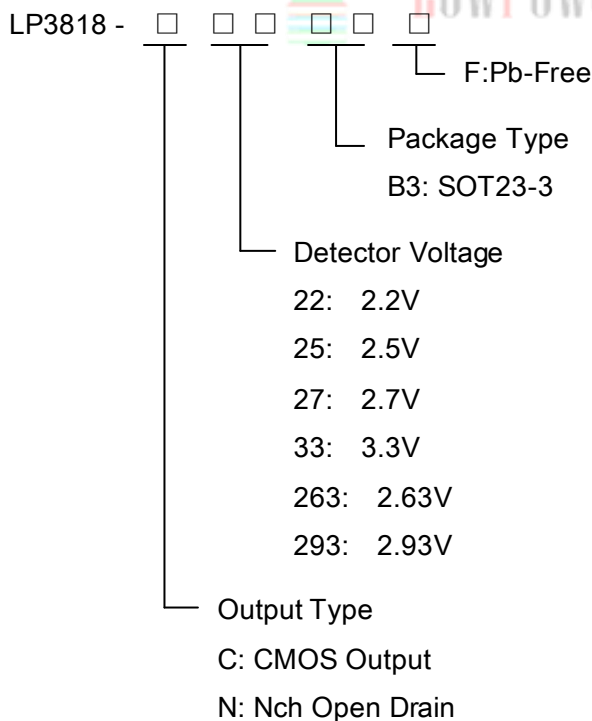
General Description

LP3818 is a series of high precision voltage detector with ultra low current consumption (5uA typ. at Vdd=3.0V). It can work at very low voltage, which makes it perfect for system reset.

LP3818 is composed of high precision voltage reference, comparator, delay circuit, output driver and resistor array. Internally preset detect voltage has a low temperature drift and requires no external trimming.

Two type of output, CMOS and N-channel open-drain are available. LP3818 is available in SOT-23-3 packages which is Pb free.

Order Information



Features

- ◆ High-precision detection Voltage 2%
- ◆ Detection Voltage 0.9V~5.5V (in 0.1V steps)
- ◆ Precise hysteresis 4% typ.
- ◆ Operating Voltage range 2.5V~5.5V
- ◆ Ultra-low current consumption 5uA typ. (at VDD 3.0V)
- ◆ Two Output forms CMOS and N-channel open-drain

Applications

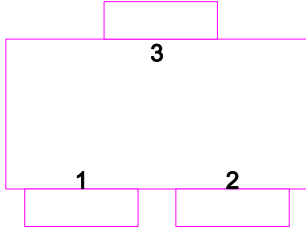
- ◇ Power monitor for portable equipment
- ◇ PDA, DSC, Mobile phone, Notebook, MP3
- ◇ CPU and Logic Circuit Reset
- ◇ Battery Checker
- ◇ Battery Back-up Circuit
- ◇ Power Failure Detector

Marking Information

| Device | Marking | Package | Shipping |
|--------|---------|---------|----------|
| LP3818 | | SOT23-3 | 3K/REEL |



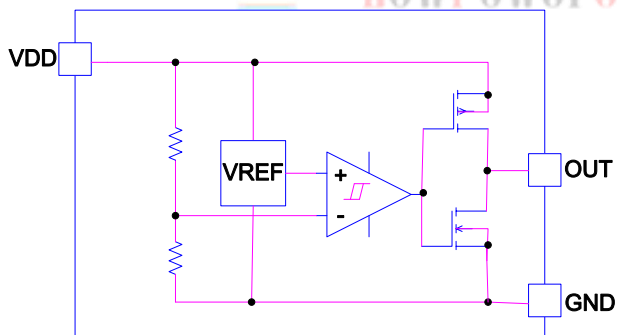
Pin Assignment

| Package Type | Pin Configurations |
|--------------|--|
| SOT23-3 |  |

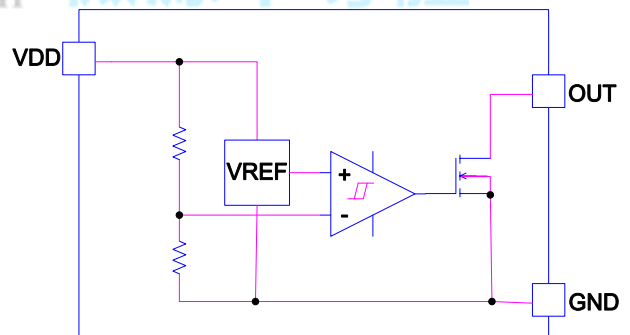
Pin Description

| Pin Number | Pin Name | Function |
|------------|----------|-------------------------------|
| 1 | VOUT | Voltage Detection output Pin. |
| 2 | VSS | GND pin. |
| 3 | VDD | Voltage input pin. |

Block Diagram



N-channel Output Open Drain



CMOS Output Type



Absolute Maximum Ratings

- ✧ Input Voltage range ----- -0.3V~6V
- ✧ Output Voltage range ----- -0.3V~6V
- ✧ Maximum Output current ----- 70mA
- ✧ Maximum power dissipation ----- 150mW
- ✧ Ambient temperature ----- -40~+85°C
- ✧ Storage temperature ----- -40~125°C
- ✧ Lead temperature and time ----- 260°C,10s

Electrical Characteristics

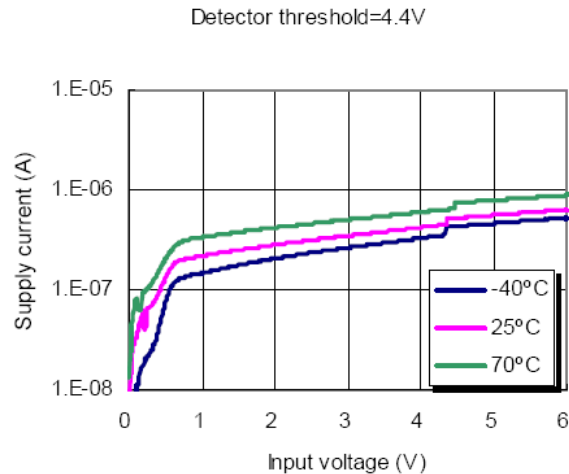
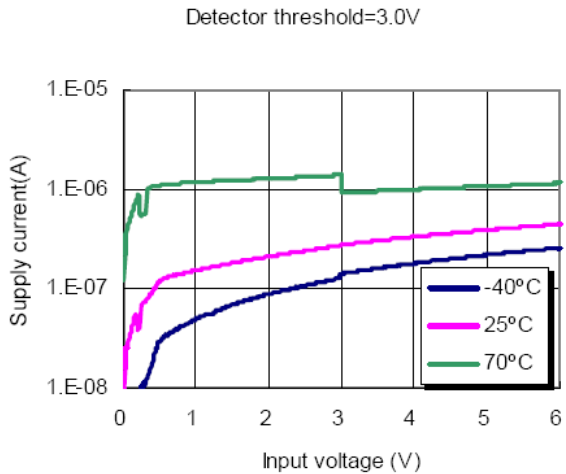
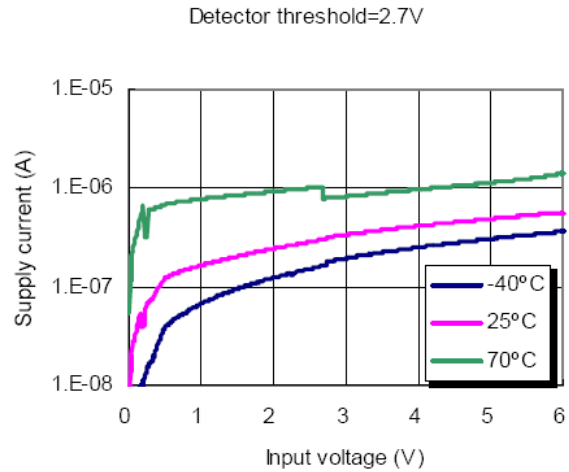
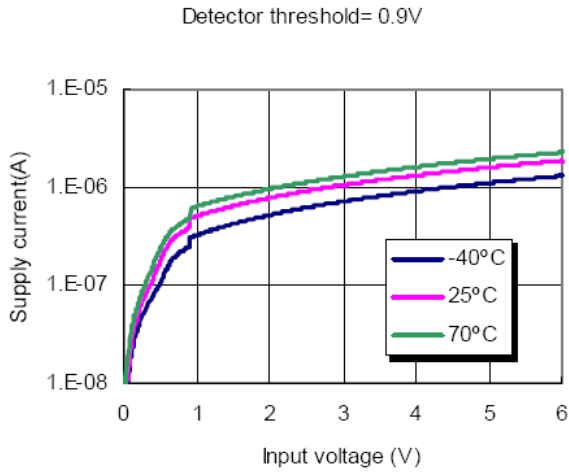
(LP3818-27B3F,T=25°C, Unless otherwise specified.)

| Symbol | Parameter | Conditions | Reference data | | | Unit |
|--------|-------------------------------|-------------------------------|----------------|-------|-------|------|
| | | | Min. | Typ. | Max. | |
| VDET | Detector Threshold | | 2.58 | 2.63 | 2.72 | V |
| VHYS | Detector Threshold Hysteresis | | 0.054 | 0.108 | 0.162 | V |
| ISS | Current consumption | | | 5 | | uA |
| VDDH | Maximum operating voltage | | | | 5.5 | V |
| VDDL | Minimum Operating voltage | | | 2.5 | | V |
| IOUT | Output current | Nch VDS=0.05V VDD=0.70V | 0.01 | 0.05 | | mA |
| | | Pch VDS=-2.1V VDD=4.50V | 1.0 | 2.0 | | mA |
| TDELAY | Output Delay Time | | | 200 | | mS |



Typical Electrical Characteristics

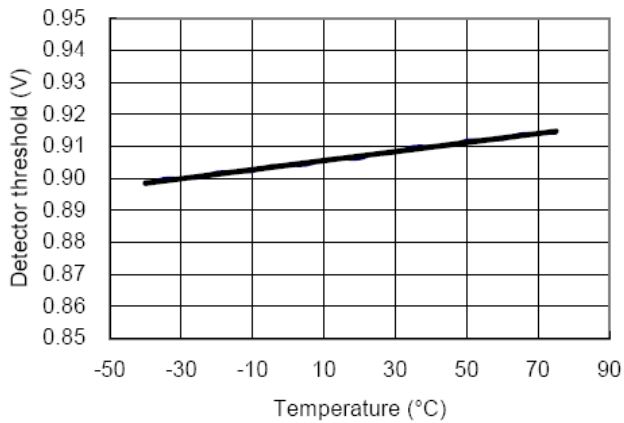
1) Supply current VS. Input voltage



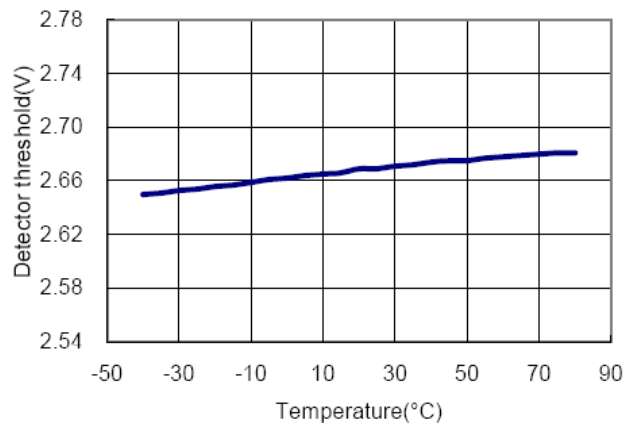


2) Detector Threshold VS. Temperature

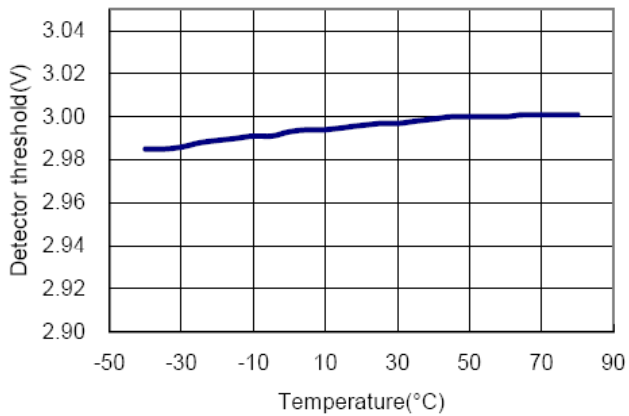
Detector threshold= 0.9V



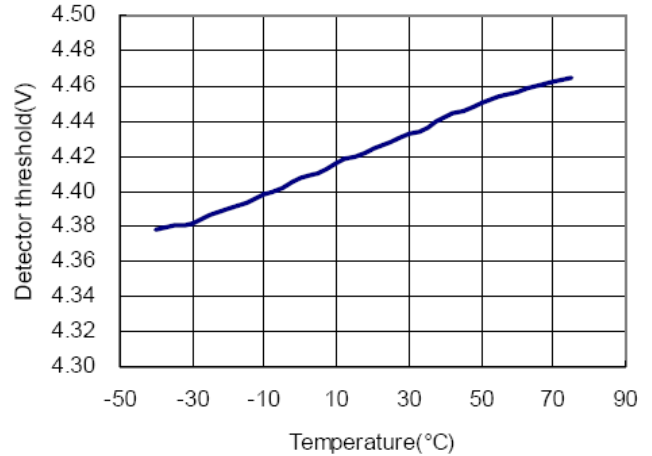
Detector threshold=2.7V



Detector threshold=3.0V

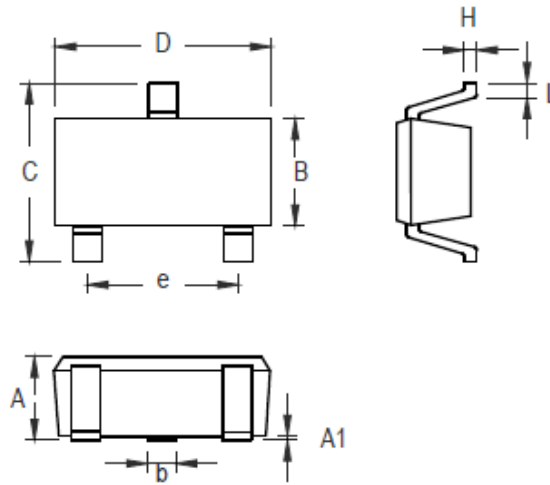


Detector threshold=4.4V





Packaging Information



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.889 | 1.295 | 0.035 | 0.051 |
| A1 | 0.000 | 0.152 | 0.000 | 0.006 |
| B | 1.397 | 1.803 | 0.055 | 0.071 |
| b | 0.356 | 0.508 | 0.014 | 0.020 |
| C | 2.591 | 2.997 | 0.102 | 0.118 |
| D | 2.692 | 3.099 | 0.106 | 0.122 |
| e | 1.803 | 2.007 | 0.071 | 0.079 |
| H | 0.080 | 0.254 | 0.003 | 0.010 |
| L | 0.300 | 0.610 | 0.012 | 0.024 |

SOT-23 Surface Mount Package