

SENSYLINK Microelectronics

(CT1723) Temperature Switch

CT1723 is Temperature Switch with Factory Program to setup Trigger Temperature and Hysteresis Temperature. It is ideally used in Thermal Protection and Temperature Alarm Application etc.

Temperature Switch with Pre-programmed Hysteresis and Trigger Temperature

Description

CT1723 is temperature switches for trigger temperature and hysteresis temperature, which is pre-programmed in factory. It needs only one pull-up resistor in most applications. For CT1723, logic output is active low with open drain structure.

The chip integrates local temperature sensor, and compares it with pre-setup threshold trigger temperature continuously after measurement each time. Once the measured temperature meets or exceeds trigger temperature, ALERT pin will get active until the temperature drops below trigger temperature minus hysteresis temperature.

Available Package: CSP-4, SOT-23package

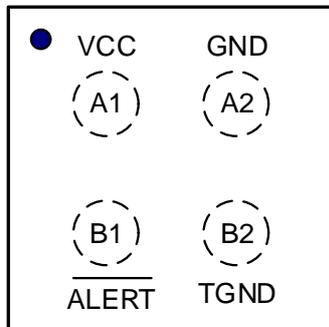
Features

- Operation Voltage: 1.4V to 5.5V
 - Avg. Power Consumption: 3.0uA (Typ.) @ 4.0Hz measurement frequency, 3.3V
 - Temperature Accuracy:
 - ±0.25°C over 40 to 85°C (Max.)
 - ±0.50°C over 50 to 100°C (Max.)
 - ±0.80°C over -40 to 125°C (Max.)
 - Measurement Frequency: 4.0Hz *
 - Trigger Temperature: 85°C*
 - Hysteresis Temperature: 10°C *
 - Active Low Output with open drain
 - Temperature Range: -50°C to 150°C
- * -- for other options, please contact Sensylink sales.
Trigger and Hysteresis Temperature Point Can be setup before shipping to customer: Trigger, -40°C to 125°C with 1.0°C step. Hysteresis, 0°C to 30°C with 2.0°C step

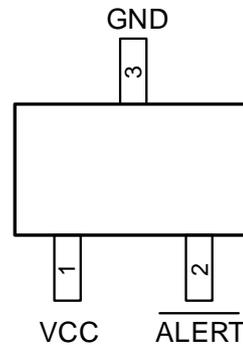
Applications

- USB PD Cable
- Power Module

PIN Configurations (Top View)



CSP-4 (Package Code J4)



SOT-23(Package Code K)

Temperature Switch with Pre-programmed Hysteresis and Trigger Temperature

Typical Application

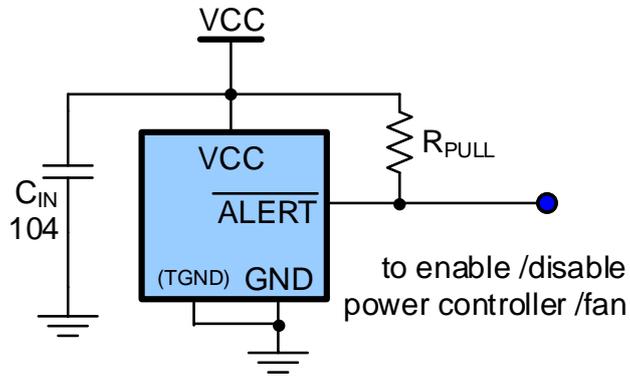


Figure 1. Typical Application of CT1723

Note1: Voltage on the ALERT pin must not higher than VCC voltage.

Note2: TGND pin must be connected to Ground.

Temperature Switch with Pre-programmed Hysteresis and Trigger Temperature
Pin Description

PIN No.		PIN Name	Description
CSP4	SOT23		
A1	1	VCC	Power supply input pin
A2	/	GND	Ground pin
B1	2	ALERT	Logic Output pin, it is active low with open drain structure. It needs an external pull-up resistor (4.7k to 100k) to VCC.
B2	3	TGND	Must be connect to Ground

Note: Voltage on the ALERT pin must not higher than VCC voltage.

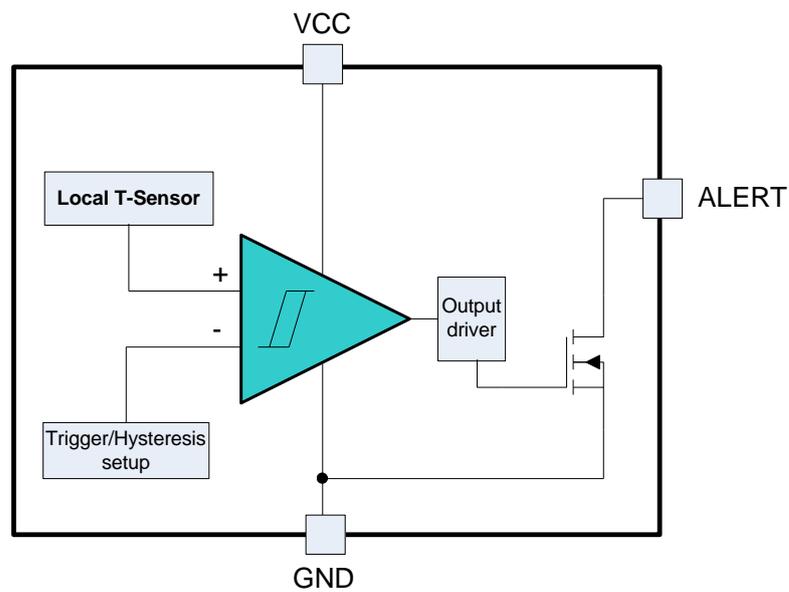
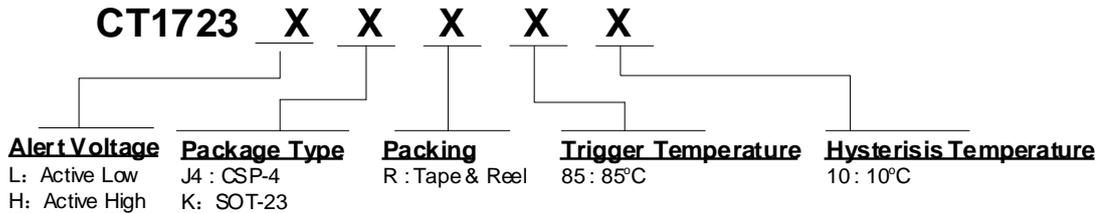
Function Block


Figure 2. CT1723 function block

Temperature Switch with Pre-programmed Hysteresis and Trigger Temperature
Ordering Information


Order PN	Accuracy	Green ¹	Package	Marking ID ²	Packing	MPQ	Operation Temperature
CT1723LJ4R8510	±0.8°C	Halogen free	CSP-4	EJ	Tape & Reel	3,000	-40°C ~+125°C
CT1723HJ4R8510	±0.8°C	Halogen free	CSP-4	EK	Tape & Reel	3,000	-40°C ~+125°C
CT1723LKR8510	±0.8°C	Halogen free	SOT-23	ELWX	Tape & Reel	3,000	-40°C ~+125°C
CT1723HKR8510	±0.8°C	Halogen free	SOT-23	EMWX	Tape & Reel	3,000	-40°C ~+125°C

For other trigger / hysteresis temperature version, please contact Sensylink sales.

Notes

1. Based on ROHS Y2012 spec, Halogen free covers lead free. So most package types Sensylink offers only states halogen free, instead of lead free.

2. Marking ID includes 2 rows of characters. In general, the 1st row of characters are part number, and the 2nd row of characters are date code plus production information.

- 1) Generally, date code is represented by 3 numbers. The number stands for year and work week information. e.g. 501 stands for the first work week of year 2015;621 stands for the 21st work week of year 2016.
- 2) Right after the date code information, the next 2-3 numbers or letters are specified to stands for supplier or production location information.
- 3) For very small outline package, there's 4 digits to stands for product information and date code, first 2 digits represent product code, and the other 2 digits stands for work week

Temperature Switch with Pre-programmed Hysteresis and Trigger Temperature***SENSYLINK Microelectronics Inc.***

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