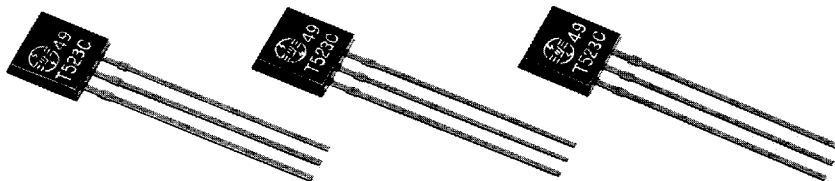




MONOLITHIC IC

MITSUMI  
COMPONENTS

# システムリセット用/For System Resetting Monolithic IC PST523 Series



本ICはさまざまなCPUシステムやその他のロジックシステムにおいて、電源投入時や電源瞬断時に電源電圧を検出し、確実にシステムにリセットをかける機能を持つICです。

Function of this IC is accurately resetting the system after detecting voltage at the time of switching power on and instantaneous power off in various CPU systems and other logic systems.

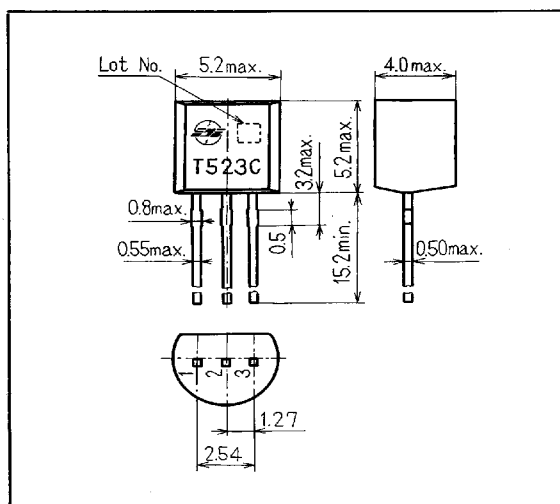
## ■特長

- (1) 消費電流が少ない。IccL 300 $\mu$ A Typ. IccH 30 $\mu$ A Typ.
- (2) リセット出力最低保障電圧が低い。0.8V Typ.
- (3) ヒステリシス電圧を設けています。50mV Typ.
- (4) リセット信号発生開始電圧。  
 PST523C 4.5V Typ. PST523I 2.9V Typ.  
 PST523D 4.2V Typ. PST523J 2.7V Typ.  
 PST523E 3.9V Typ. PST523K 2.5V Typ.  
 PST523F 3.6V Typ. PST523L 2.3V Typ.  
 PST523G 3.3V Typ. PST523M 2.1V Typ.  
 PST523H 3.1V Typ. PST523N 1.9V Typ.
- (5) テーピングタイプもあります。

## ■用途

- (1) バッテリバックアップされたメモリの制御回路。
- (2) 電源ON~OFF時の誤動作対策。
- (3) 電源の瞬断等によるシステム暴走対策。
- (4) パソコン、プリンタ、VTR、その他CPU搭載機器のリセット機能。

## ■外形図/DIMENSIONS



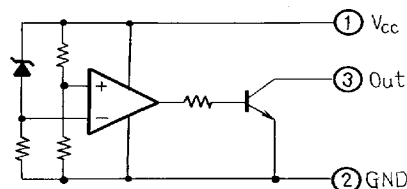
## ■FEATURES

- (1) Current consumption is low. ICCL=300 $\mu$ A Typ. ICCH=30 $\mu$ A Typ.
- (2) Resetting output minimum guarantee voltage is low. 0.8V Typ.
- (3) Hysteresys voltage is provided. 50mV Typ.
- (4) Reset signal generation starting voltages :  
 PST523C 4.5V Typ. PST523I 2.9V Typ.  
 PST523D 4.2V Typ. PST523J 2.7V Typ.  
 PST523E 3.9V Typ. PST523K 2.5V Typ.  
 PST523F 3.6V Typ. PST523L 2.3V Typ.  
 PST523G 3.3V Typ. PST523M 2.1V Typ.  
 PST523H 3.1V Typ. PST523N 1.9V Typ.
- (5) Taping type is also available.

## ■APPLICATIONS

- (1) As control circuit of battery-backed memory.
- (2) As measure against erroneous operations at power ON-OFF.
- (3) As measure against system runaway at instaneous break of power supply etc.
- (4) As resetting function for the CPU-mounted equipment, such as personal computers, printers, VTRs and so forth.

## ■等価回路/EQUIVALENT CIRCUIT





# モノリシック IC



## 最大定格/MAXIMUM RATING

| 項目/Item                    | 記号/Symbol | 定格/Rating  | 単位/Unit |
|----------------------------|-----------|------------|---------|
| 動作温度 Operating Temperature | Topr      | -20~+75    | ℃       |
| 保存温度 Storage Temperature   | Tstg      | -30~+125   | ℃       |
| 消費電力 Power Dissipation     | Pd        | 200        | mW      |
| 電源電圧 Supply Voltage        | Vcc       | -0.3~+15.0 | V       |

## 電気的特性/ELECTRICAL CHARACTERISTICS of PST523

(Ta=25℃)

| 項目<br>Item                                         | 記号<br>Symbol | 測定回路<br>Measuring<br>Circuit | 測定条件<br>Measuring Conditions             | 最小<br>Min. | 標準<br>Typ. | 最大<br>Max. | 単位<br>Unit |
|----------------------------------------------------|--------------|------------------------------|------------------------------------------|------------|------------|------------|------------|
| 検出電圧<br>Detecting Voltage                          | Vs           | 1                            | RL=200Ω<br>VOL≤0.4V                      | PST523C    | 4.30       | 4.50       | 4.70       |
|                                                    |              |                              |                                          | PST523D    | 4.00       | 4.20       | 4.40       |
|                                                    |              |                              |                                          | PST523E    | 3.70       | 3.90       | 4.10       |
|                                                    |              |                              |                                          | PST523F    | 3.40       | 3.60       | 3.80       |
|                                                    |              |                              |                                          | PST523G    | 3.10       | 3.30       | 3.50       |
|                                                    |              |                              |                                          | PST523H    | 2.90       | 3.10       | 3.30       |
|                                                    |              |                              |                                          | PST523I    | 2.75       | 2.9        | 3.05       |
|                                                    |              |                              |                                          | PST523J    | 2.55       | 2.7        | 2.85       |
|                                                    |              |                              |                                          | PST523K    | 2.35       | 2.5        | 2.65       |
|                                                    |              |                              |                                          | PST523L    | 2.15       | 2.3        | 2.45       |
|                                                    |              |                              |                                          | PST523M    | 1.95       | 2.1        | 2.25       |
|                                                    |              |                              |                                          | PST523N    | 1.75       | 1.9        | 2.05       |
| ローレベル出力電圧 Low-Level Output Voltage                 | VOL          | 1                            | RL=200Ω                                  |            |            | 0.4        | V          |
| 出力リーク電流 Output Leakage Current                     | IOH          | 1                            | Vcc=15V                                  |            |            | 0.1        | μA         |
| ヒステリシス電圧 Hysteresis Voltage                        | ΔVs          | 1                            | RL=200Ω                                  | 30         | 50         | 100        | mV         |
| 検出電圧温度係数 Detecting Voltage Temperature Coefficient | Vs/ΔT        | 1                            | RL=200Ω                                  |            | ±0.01      |            | %/℃        |
| ON時回路電流 Circuit Current at ON Time                 | IccL         | 1                            | Vcc=Vs min.<br>-0.05V                    |            | 300        | 500        | μA         |
| OFF時回路電流 Circuit Current at OFF Time               | IccH         | 1                            | Vcc=5.25V                                |            | 30         | 50         | μA         |
| 動作限界電圧 Threshold Operating Voltage                 | VopL         | 1                            | RL=200Ω<br>VOL≤0.4V                      |            | 0.8        | 1.0        | V          |
| "L"伝達遅延時間 "L" Transmission Delay Time              | tpHL         | 2                            | RL=1.0kΩ<br>CL=100pF                     |            | 10         |            | μS         |
| "H"伝達遅延時間 "H" Transmission Delay Time              | tpLH         | 2                            | RL=1.0kΩ<br>CL=100pF                     |            | 15         |            | μS         |
| ON時出力電流 I Output Current at ON Time I              | IOL I        |                              | Vcc=Vs min.<br>-0.05V<br>Tc=25℃          | 20         |            |            | mA         |
| ON時出力電流 II Output Current at ON Time II            | IOL II       |                              | Vcc=Vs min.<br>-0.05V<br>Tc=-20~<br>+75℃ | 16         |            |            | mA         |

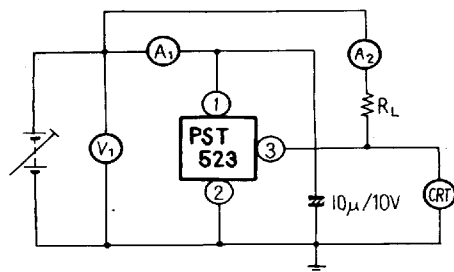




# MONOLITHIC IC

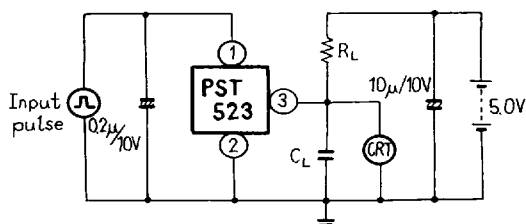
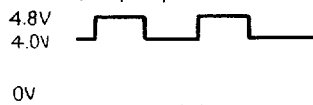
# MITSUMI COMPONENTS

## 測定回路/MEASURING CIRCUITS



Note (1) A : 直流電流計/DC Ammeter  
V : 直流電圧計/DC Voltmeter  
CRT: オシロスコープ/Oscilloscope

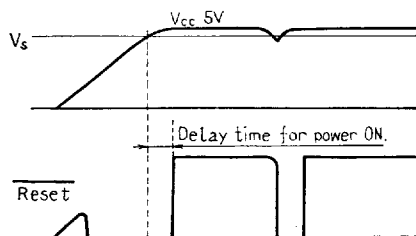
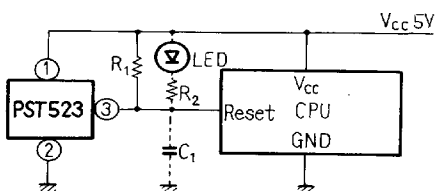
(2) 入力パルス/ Input pulse



[注] 入力モデルは PST523C の例です。

[Note] Example is PST523C.

## 測定回路例/APPLIED CIRCUITS



[注]

- (1) LED R<sub>2</sub> を接続することにより、電圧低下インジケータとなります。
- (2) C<sub>1</sub> を接続し、C<sub>1</sub>、R<sub>1</sub> による時定数をえらぶことによりパワーオンディレイタイムを設定できます。

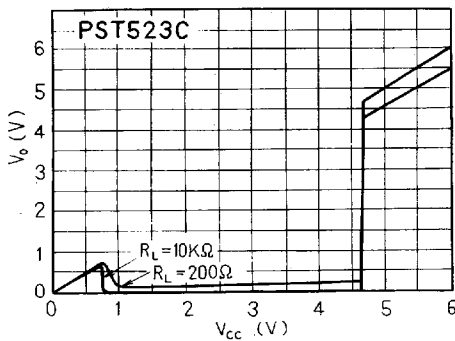
[Note]

- (1) Connecting of LED and R<sub>2</sub> obtains a voltage drop indicator.
- (2) Connecting of C<sub>1</sub> and selection of time constant with C<sub>1</sub> and R<sub>1</sub> set the power-ON delay time.

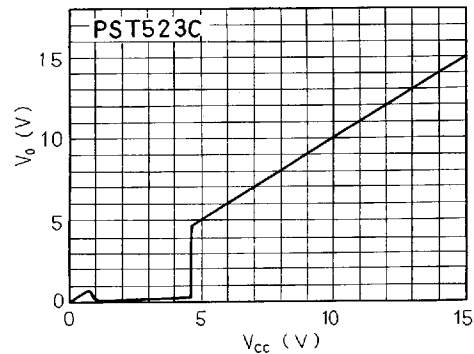


■ PST523C 特性/CHARACTERISTICS

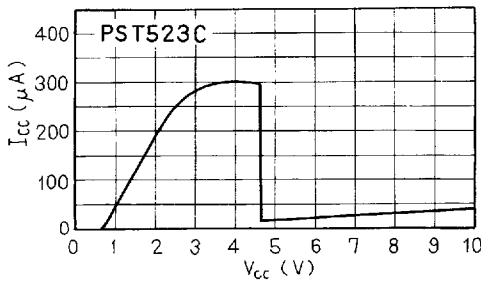
■ Vcc vs. Vout



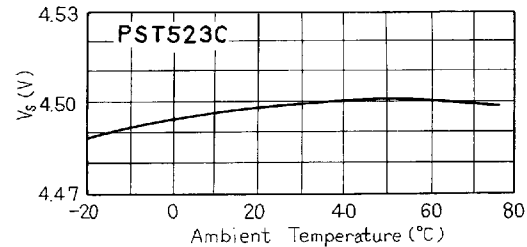
■ Vcc vs. Vout



■ Vcc vs. Icc



■ Vs vs. Temp.



〔注〕 特性カーブはPST523Cを代表例として掲載しています。なお PST523D~523N は検出電圧を除き同一です。

〔Note〕 Characteristics is the representative example of PST523C. PST523D~523N has same characteristics except detecting voltage.

■ 遅延時間/Delay Time (ゲート IC との組合わせ/Combination with the gate IC)

