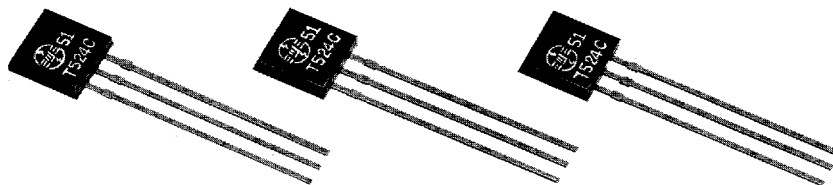




MONOLITHIC IC

MITSUMI
COMPONENTS

システムリセット用/For System Resetting Monolithic IC PST524 Series



PST524 シリーズは、さまざまなCPUシステムやワイヤード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、確実にリセットをかける機能をもつICです。本ICはPST523シリーズの、ハイリセット出力タイプです。

■特長

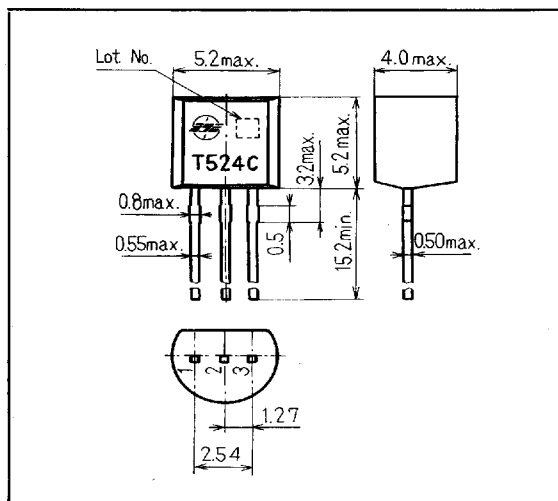
- (1) 消費電流が少ない。IccL 30 μ A Typ. IccH 300 μ A Typ.
- (2) リセット出力最低保障電圧が低い。0.8V Typ.
- (3) ヒステリシス電圧を設けています。50mV Typ.
- (4) リセット信号発生開始電圧。

PST524C 4.5V Typ.	PST524I 2.9V Typ.
PST524D 4.2V Typ.	PST524J 2.7V Typ.
PST524E 3.9V Typ.	PST524K 2.5V Typ.
PST524F 3.6V Typ.	PST524L 2.3V Typ.
PST524G 3.3V Typ.	PST524M 2.1V Typ.
PST524H 3.1V Typ.	PST524N 1.9V Typ.

■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



This IC Series is usable for the CPU systems of all types and wired logic systems as it has the function of detecting the power supply voltage at the time of initial resetting after switching the power supply on and after instantaneous break in power supply voltage, thereby accurately resetting the system. This particular series has especially been designed as the high resetting output type of the PST523 Series.

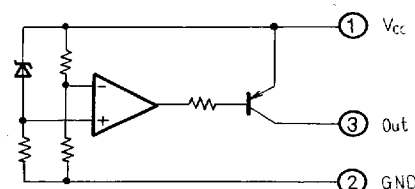
■FEATURES

- (1) Current consumption is low : ICCL=30 μ A Typ. ICCH=300 μ A Typ.
- (2) Resetting output minimum guarantee voltage is low : 0.8V Typ.
- (3) Hysteresis voltage is provided : 50mV Typ.
- (4) Reset signal generation starting voltage :
PST524C 4.5V Typ. PST524I 2.9V Typ.
PST524D 4.2V Typ. PST524J 2.7V Typ.
PST524E 3.9V Typ. PST524K 2.5V Typ.
PST524F 3.8V Typ. PST524L 2.3V Typ.
PST524G 3.3V Typ. PST524M 2.1V Typ.
PST524H 3.1V Typ. PST524N 1.9V Typ.

■APPLICATION

- (1) As control circuit of battery-backed memory units.
- (2) As measure against erroneous operation at power supply ON-OFF time.
- (3) As measure against the system runaway under instantaneous break of the power supply.
- (4) As resetting function for personal computers, printers, VTRs and other CPU-mounted equipment.

■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	°C
保存温度 Storage Temperature	Tstg	-30~+125	°C
消費電力 Power Dissipation	Pd	200	mW
電源電圧 Supply Voltage	Vcc	-0.3~+7.5	V

■電気的特性/ELECTRICAL CHARACTERISTICS of 524

(Ta=25°C)

項目 Item	記号 Symbol	測定回路 Measuring Circuit	測定条件 Measuring Conditions	最小 Min.	標準 Typ.	最大 Max.	単位 Unit
検出電圧 Detecting Voltage	Vs	1	$R_L = 4.7k\Omega$ $V_{OH} \geq V_{CC} - 0.4$	PST524C	4.30	4.50	4.70
				PST524D	4.00	4.20	4.40
				PST524E	3.70	3.90	4.10
				PST524F	3.40	3.60	3.80
				PST524G	3.10	3.30	3.50
				PST524H	2.90	3.10	3.30
				PST524I	2.75	2.90	2.95
				PST524J	2.55	2.70	2.85
				PST524K	2.35	2.50	2.65
				PST524L	2.15	2.30	2.45
				PST524M	1.95	2.10	2.25
				PST524N	1.75	1.90	2.05
ハイレベル出力電圧 Low-Level Output Voltage	V _{OH}	1	$R_L = 4.7k\Omega$	$V_{CC} - 0.4$			V
ON時出力電流 Output Current	I _{OH}	1	$V_{CC} = V_{Smin.} - 0.05V$ $R_L = 0\Omega$ $T_c = 25^\circ C$	-2.0	-5.0		mA
出力リーク電流 Output Leakage Current	I _{OL}	1	$V_{CC} = 7.5V$			0.1	μA
ヒステリシス電圧 Hysteresis Voltage	ΔV_S	1	$R_L = 4.7k\Omega$	30	50	100	mV
検出電圧温度係数 Detecting Voltage Temperature Coefficient	$V_S/\Delta T$	1	$R_L = 4.7k\Omega$		± 0.01		%/°C
ON時回路電流 Circuit Current at ON Time	I _{ccH}	1	$V_{CC} = V_{Smin.} - 0.05V$		300	500	μA
OFF時回路電流 Circuit Current at OFF Time	I _{ccL}	1	$V_{CC} = 5.25V$		30	50	μA
動作限界電圧 Threshold Operating Voltage	V _{opL}	1	$R_L = 4.7k\Omega$ $V_{OH} \geq V_{CC} - 0.4$		0.8	1.0	V
"L"伝達遅延時間 "L" Transmission Delay Time	tpHL	2	$R_L = 4.7k\Omega$ $C_L = 100pF$		10		μS
"H"伝達遅延時間 "H" Transmission Delay Time	tpLH	2	$R_L = 4.7k\Omega$ $C_L = 100pF$		10		μS



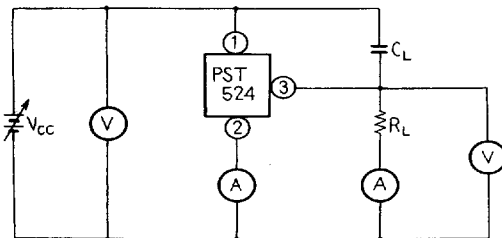


MONOLITHIC IC

MITSUMI COMPONENTS

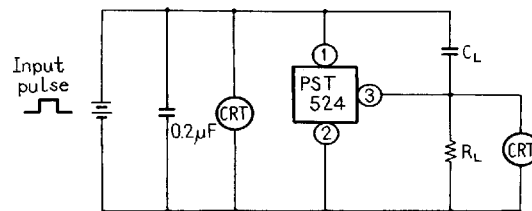
測定回路/MEASURING CIRCUITS

(1)

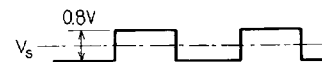


A : 直流電流計/DC Ammeter
V : 直流電圧計/DC Voltmeter
CRT : オシロスコープ/Oscilloscope

(2)



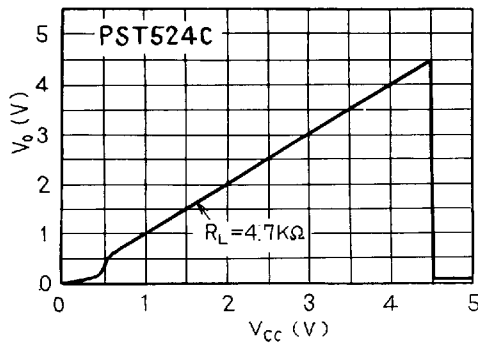
入力パルス/Input pulse



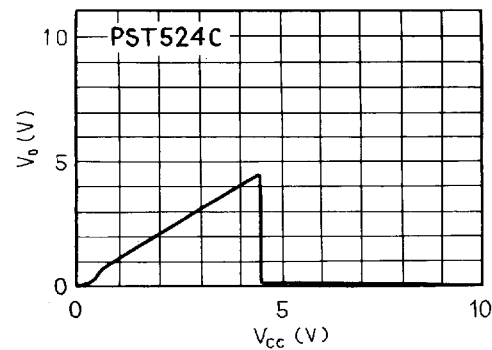
0V

PST524C 特性/CHARACTERISTICS

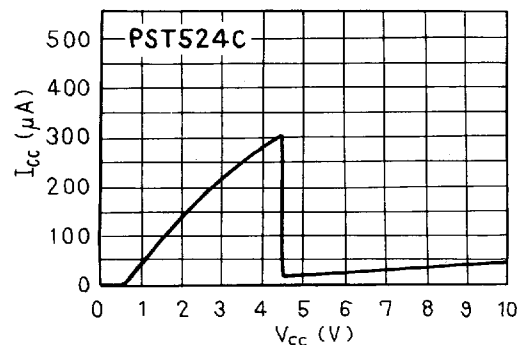
Vcc vs. Vout



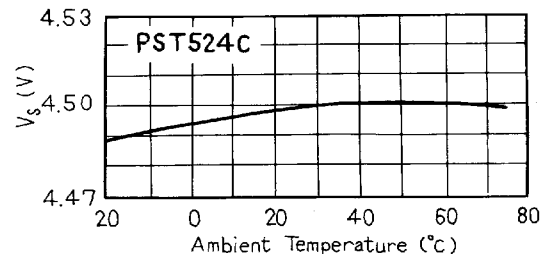
Vcc vs. Vout



Vcc vs. Icc



Vs vs. Temp.



[注] 特性カーブはPST524Cを代表例として掲載しています。なおPST524D~524Nは検出電圧を除き同一です。

[Note] Characteristics is the representative example of PST524C. PST524D~524N has same characteristics except detecting voltage.