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KA75XXX

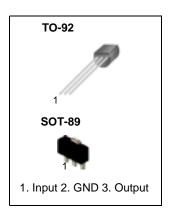
Voltage Detector

Features

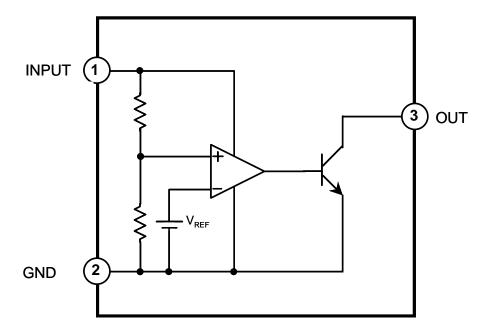
- Detecting Against Error Operations At The Power On/off.
- Resetting Function For The Low Voltage Microprocessor.
- Checking Low Battery

Description

The KA75250/KA75270/KA75290/KA75310/KA75330/KA75360/KA75390/KA75420/KA75450 prevents the error of system from supply voltage below normal voltage level at the time the power on and instantaneous power off in systems.



Internal Block Diagram



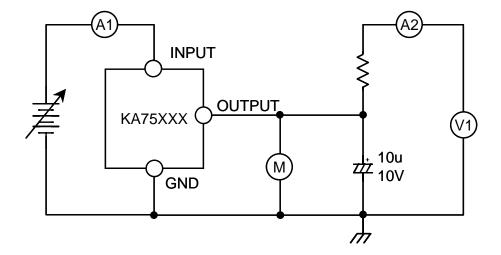
Absolute Maximum Rating (TA=25°C)

Characteristic	Symbol	Value	Unit
Supply Voltage	Vcc	0.3 ~ +15.0	V
Detecting Voltage	VDET	2.5/2.7/2.9/3.1 3.3/3.6/3.9/4.2/4.5	V
Hysteresis Voltage	VHYS	50	mV
Operating Temperature	TOPR	-25 ~ +85	°C
Storage Temperature	TSTG	-50 ~ + 150	°C
Power Dissipation TO-92 SOT-89	PD	200 500	mW
Detecting Voltage Temperature Coefficient	ΔVDET/ΔT	$R_L = 200\Omega$, +0.01	%/°C

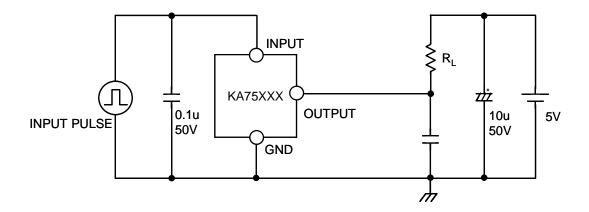
Electrical Characteristics (T_A=25°C)

Characteristic	Symbol	Test Conditions	Min	Тур	Max	Unit
Detecting Voltage	VDET	RL= 200Ω KA7525 VOL ≤ 0.4V KA7529 KA7531 KA7533 KA7536 KA7539 KA7542	2.55 2.75 2.95 3.15 3.45 3.75 4.05	2.5 2.7 2.9 3.1 3.3 3.6 3.9 4.2 4.5	2.65 2.85 3.05 3.25 3.45 3.75 4.05 4.35 4.65	V
Low Output Voltage	Vol	$R_L = 200\Omega$	-	-	0.4	V
Output Leakage Current	ILKG	Vcc = 15V	-	-	0.1	uA
Hysteresis Voltage	VHYS	RL = 200Ω	30	50	100	mV
Detecting Voltage Temperature Coefficient	ΔV _{DET} /ΔT	R _L = 200Ω	-	±0.01	-	%/°C
Circuit Current(At On Time)	ICCL	VCC = VDET(MIN) -0.05V	-	300	500	uA
Circuit Current(At Off Time)	Іссн	VCC = 5.25V	-	30	50	uA
Threshold Operating Voltage	VTH(OPR)	$R_L = 200\Omega$, $V_{OL} \le 0.4V$	-	0.8	1.0	V
" L"± Transmission Delay Time	TOL	$R_L = 1.0 k\Omega$, $C_L = 100 pF$	0.6	10	-	us
" H"± Transmission Delay Time	Тон	$R_L = 1.0k\Omega$, $C_L = 100pF$	-	15	20	us
Output Current (At On Time)	loli	VCC = VDET(MIN) -0.05V T _A = 25°C	' 10	20	30	mA
Output Current (At On Time)	lolii	VCC = VDET(MIN) - 0.05\ T _A = -25 ~ +85°C	8	16	30	mA

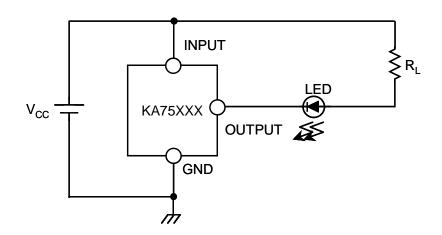
Test Circuit 1.



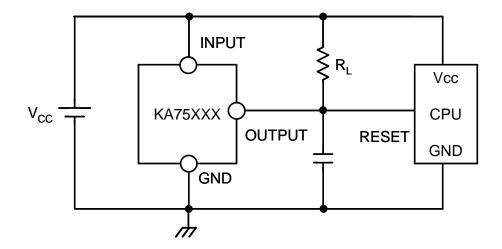
Test Circuit 2.



Test Circuit 3.



Application Circuit

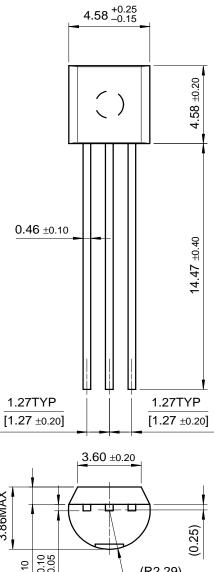


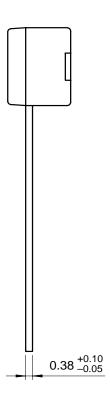
Mechanical Dimensions

Package

Dimensions in millimeters

TO-92



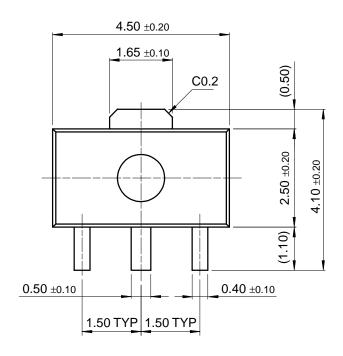


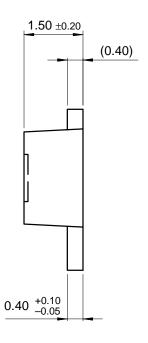
Mechanical Dimensions (Continued)

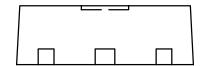
Package

Dimensions in millimeters

SOT-89







Ordering Information

Product Number	Package	Operating Temperature			
KA75250Z					
KA75270Z					
KA75290Z					
KA75310Z	TO-92				
KA75330Z					
KA75360Z					
KA75390Z					
KA75420Z					
KA75450Z		-25 ~ +85°C			
KA75250M		-23 ~ +03 C			
KA75270M					
KA75290M	SOT-89				
KA75310M					
KA75330M					
KA75360M					
KA75390M					
KA75420M					
KA75450M					

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