

KA75XXX

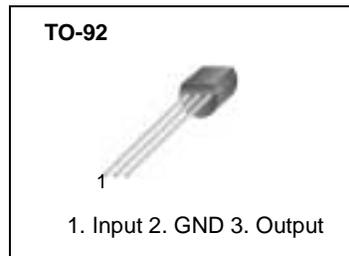
Voltage Detector

Features

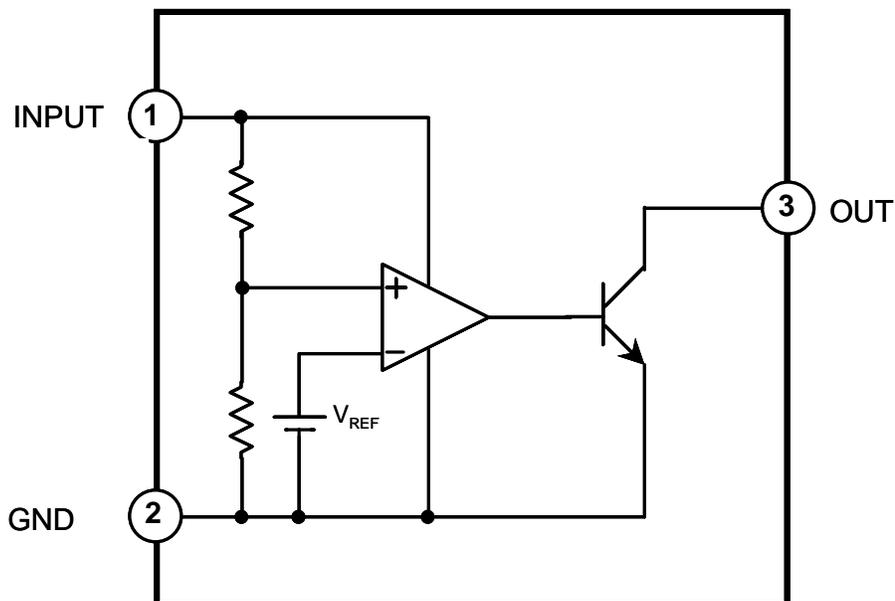
- Detecting against error operations at the power ON/OFF.
- Resetting function for the low voltage microprocessor.
- Checking low battery

Description

The KA75250/KA75270/KA75290/KA75310/KA75330/KA75360/KA75390/KA75420/KA75450 prevents 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

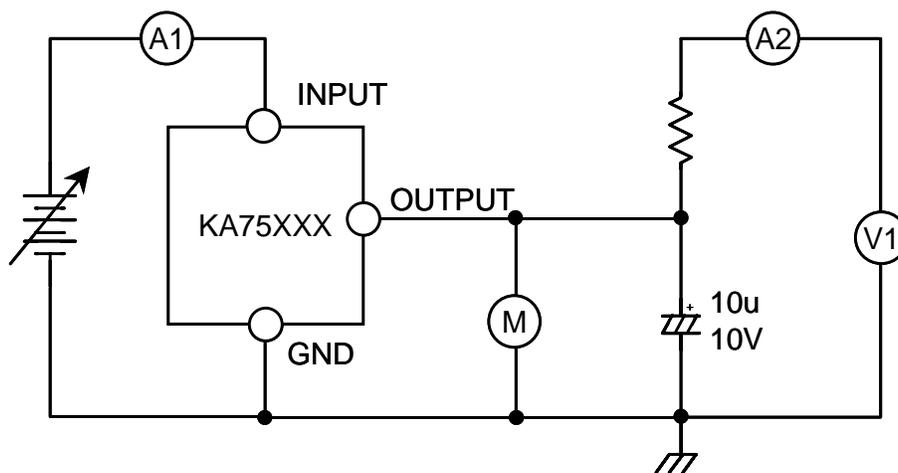
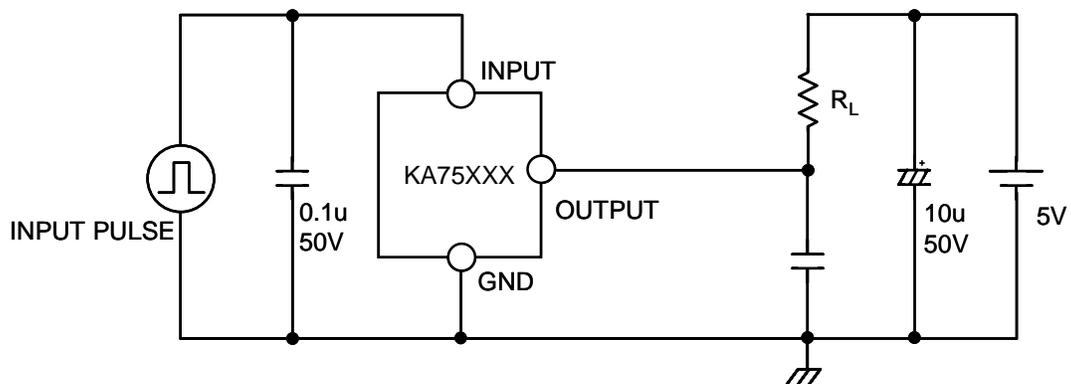
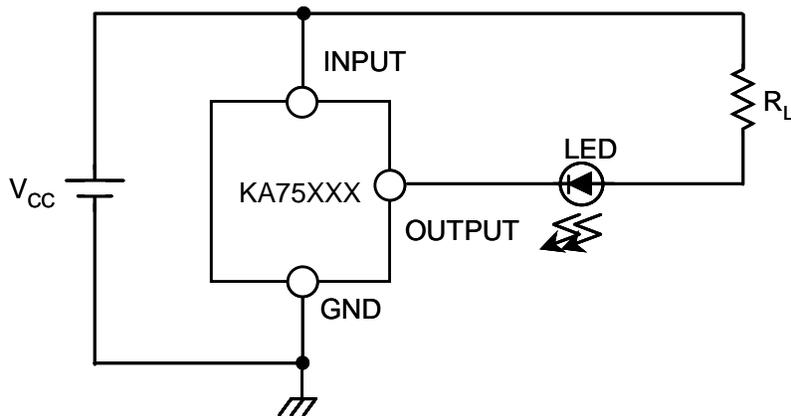


Absolute Maximum Rating (TA=25°C)

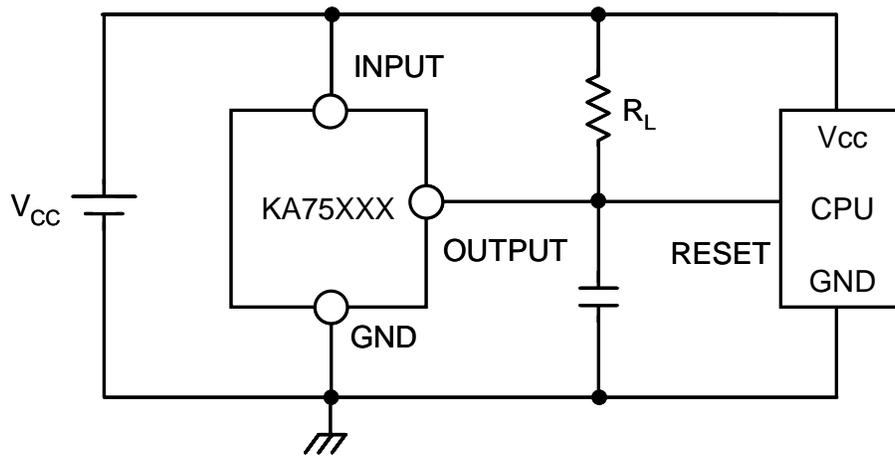
Characteristic	Symbol	Value	Unit
Supply Voltage	V _{CC}	0.3 ~ + 15.0	V
Detecting Voltage	V _{DET}	2.5/2.7/2.9/3.1 3.3/3.6/3.9/4.2/4.5	V
Hysteresis Voltage	V _{HYS}	50	mV
Operating Temperature	T _{OPR}	- 25 ~ + 85	°C
Storage Temperature	T _{STG}	- 50 ~ + 150	°C
Power Dissipation	P _D	200	mW
Detecting Voltage Temperature Coefficient	ΔV _{DET} /ΔT	R _L = 200Ω, +0.01	%/°C

Electrical Characteristics (TA=25°C)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Detecting Voltage	V _{DET}	R _L =200Ω V _{OL} ≤ 0.4V	KA75250 2.35	2.5	2.65	V
		KA75270 2.55	2.7	2.85		
		KA75290 2.75	2.9	3.05		
		KA75310 2.95	3.1	3.25		
		KA75330 3.15	3.3	3.45		
		KA75360 3.45	3.6	3.75		
		KA75390 3.75	3.9	4.05		
		KA75420 4.05	4.2	4.35		
KA75450 4.35	4.5	4.65				
Low Output Voltage	V _{OL}	R _L =200Ω	-	-	0.4	V
Output Leakage Current	I _{LKG}	V _{CC} =15V	-	-	0.1	μA
Hysteresis Voltage	V _{HYS}	R _L =200Ω	30	50	100	mV
Detecting Voltage Temperature Coefficient	ΔV _{DET} /ΔT	R _L =200Ω	-	±0.01	-	%/°C
Circuit Current(at on time)	I _{CCL}	V _{CC} =V _{DET} (MIN)-0.05V	-	300	500	μA
Circuit Current(at off time)	I _{CCH}	V _{CC} =5.25V	-	30	50	μA
Threshold Operating Voltage	V _{TH(OPR)}	R _L =200Ω, V _{OL} ≤ 0.4V	-	0.8	1.0	V
" L"± Transmission Delay Time	T _{OL}	R _L =1.0kΩ, C _L =100pF	0.6	10	-	μS
" H"± Transmission Delay Time	T _{OH}	R _L =1.0kΩ, C _L =100pF	-	15	20	μS
Output Current (at on time)	I _{OLI}	V _{CC} =V _{DET} (MIN) - 0.05V, T _A =25°C	10	20	30	mA
Output Current (at on time)	I _{OLII}	V _{CC} =V _{DET} (MIN) - 0.05V T _A = -25 ~ + 85°C	8	16	30	mA

TEST CIRCUIT 1.**TEST CIRCUIT 2.****TEST CIRCUIT 3.**

Application Circuit

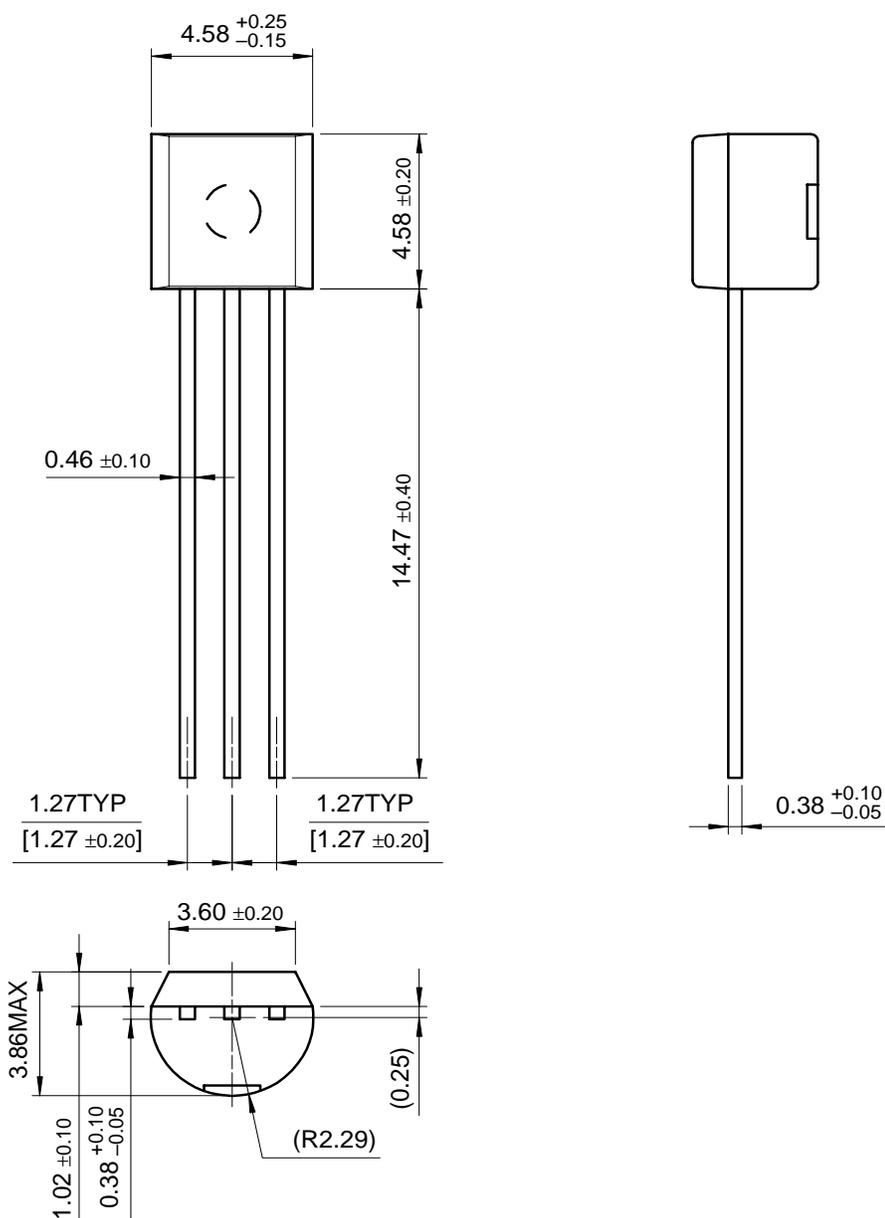


Mechanical Dimensions

Package

Dimensions in millimeters

TO-92



Ordering Information

Product Number	Package	Operating Temperature
KA75250Z	TO-92	-25 ~ +85°C
KA75270Z		
KA75290Z		
KA75310Z		
KA75330Z		
KA75360Z		
KA75390Z		
KA75420Z		
KA75450Z		

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

Fairchild Semiconductor

SEARCH | [Parametric](#) | [Cross Reference](#)[space](#)[Product Folders and](#)[Applies](#)

find products

[Home](#) >> [Find products](#) >>[Products groups](#)[Analog and Mixed](#)[Signal](#)[Discrete](#)[Interface](#)[Logic](#)[Microcontrollers](#)[Non-Volatile](#)[Memory](#)[Optoelectronics](#)[Markets and](#)[applications](#)[New products](#)[Product selection and](#)[parametric search](#)[Cross-reference](#)[search](#)

KA75330Z

Voltage Detector (3.3V)

Contents

[General description](#) | [Features](#) | [Product status/pricing/package](#)

General description

The KA75250/270/290/310/33/360/390/420/450 prevents error of system from supply voltage below normal voltage level at the time the power on and instantaneous power off in systems.

[back to top](#)

Features

- Detecting against error operations at the power ON/OFF.
- Resetting function for the low voltage microprocessor.
- Checking low battery

[back to top](#)

Product status/pricing/package

Product	Product status	Package type	Leads	Packing method
KA75330ZBU	Full Production	TO-92	3	BULK
KA75330ZTA	Full Production	TO-92	3	TAPE REEL

[back to top](#)

Related Links

[Request samples](#)[Dotted line](#)[How to order products](#)[Dotted line](#)[Product Change Notices](#)[\(PCNs\)](#)[Dotted line](#)[Support](#)[Dotted line](#)[Distributor and field sales](#)[representatives](#)[Dotted line](#)[Quality and reliability](#)[Dotted line](#)[Design tools](#)

Datasheet

[Download this](#)[datasheet](#)

PDF

[e-mail this datasheet](#)

[E-

This page [Print version](#)

[Home](#) | [Find products](#) | [Technical information](#) | [Buy products](#) |
[Support](#) | [Company](#) | [Contact us](#) | [Site index](#) | [Privacy policy](#)

[© Copyright 2002 Fairchild Semiconductor](#)
