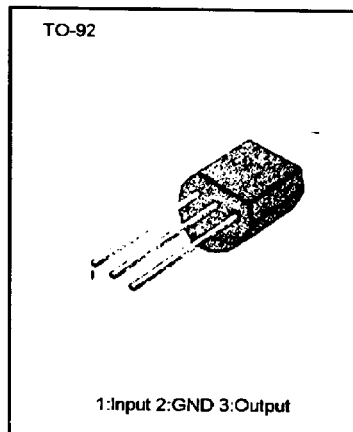


### 3.3V VOLTAGE DETECTOR

The KA7533 prevents error of system from supply voltage below normal voltage level at the time the power on and instantaneous power off in systems.

### FEATURES

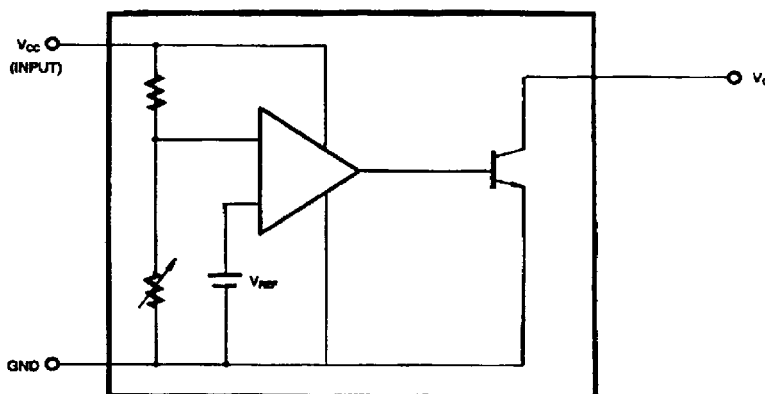
- Detecting against error operations at the power ON/OFF.
- Reaetting function for the low voltage microprocessor.
- Checking low battery.



### ORDERING INFORMATION

Device	Package	Operating Temperature
KA7533Z	TO-92	-30 ~ + 75 °C

### BLOCK DIAGRAM



**ABSOLUTE MAXIMUM RATING** ( $T_A = 25^\circ\text{C}$ )

Characteristic	Symbol	Value	Unit
Supply Voltage	$V_{CC}$	00.3 ~ +15.0	V
Detecting Voltage	$V_{DET}$	3.3	V
Hysteresis Voltage	$V_{HYS}$	50	mV
Operating Temperature	$T_{OPR}$	-30 ~ +75	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-50 ~ +150	$^\circ\text{C}$
Power Dissipation	$P_D$	200	mW
Detecting Voltage Temperature Coefficient	$\Delta V_{DET}/\Delta T$	$\pm 0.01$	%/ $^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$ )

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Detecting Voltage	$V_{DET}$	$R_L = 200\Omega, V_{OL} \leq 0.4V$	3.15	3.3	3.45	V
Low Output Voltage	$V_{OL}$	$R_L = 200\Omega$	—	—	0.25	V
Output Leakage Current	$I_{LKG}$	$V_{CC} = 15V$	—	—	0.1	$\mu\text{A}$
Hysteresis Voltage	$V_{HYS}$	$R_L = 200\Omega$	30	50	100	mV
Detecting Voltage Temperature Coefficient	$\Delta V_{DET}/\Delta T$	$R_L = 200\Omega$		$\pm 0.1$		%/ $^\circ\text{C}$
Circuit Current (at on time)	$I_{CCL}$	$V_{CC} = V_{DET(MIN)} - 0.05V$	—	300	500	$\mu\text{A}$
Circuit Current (at off time)	$I_{CCH}$	$V_{CC} = 5.25V$	—	30	50	$\mu\text{A}$
Threshold Operating Voltage	$V_{TH(OPR)}$	$R_L = 200\Omega, V_{OL} \leq 0.4V$	0.6	0.8	1.0	V
"L" Transmission Delay Time	$t_{OL}$	$R_L = 1.0K\Omega, C_L = 100pF$	—	10	15	$\mu\text{S}$
"H" Transmission Delay Time	$t_{OH}$	$R_L = 1.0K\Omega, C_L = 100pF$	—	15	20	$\mu\text{S}$
Output Current (at on time I)	$I_{OLI}$	$V_{CC} = V_{DET(MIN)} - 0.05V, T_C = 25^\circ\text{C}$	10	18	28	mA
Output Current (at on time II)	$I_{OLII}$	$V_{CC} = V_{DET(MIN)} - 0.05V, T_C = -30 \sim +75^\circ\text{C}$	8	16	30	mA

Dimensions in Millimeters

