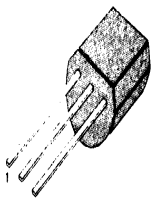
VOLTAGE DETECTOR

The KA75250/270/290/310/33/36/39/42/45 prevents error of system from supply voltage below normal voltage level at the time the power on and instantaneous power off in systems.

TO-92

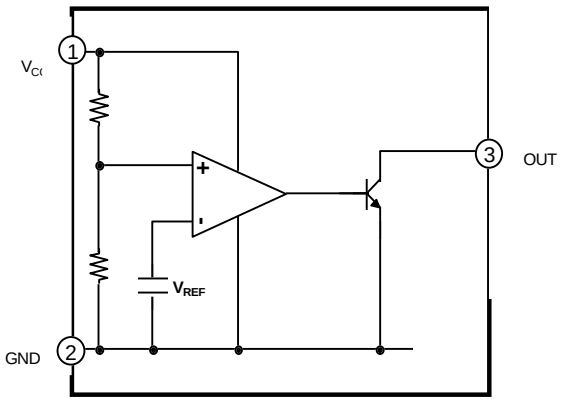


1.Input 2.GND 3.Output

FEATURES

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

BLOCK DIAGRAM



ORDERING INFORMATION

Device	PKG	Operating Temp.
KA75250 KA75270 KA75290 KA75310 KA7533 KA7536 KA7539 KA7542 KA7545	TO-92	-30~ + 75℃

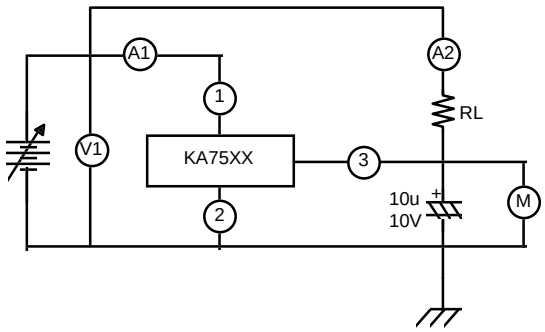
ABSOLUTE MAXIMUM RATING (T_A = 25℃)

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}	- 30 ~ + 75	℃
Storage Temperature	T_{STG}	- 50 ~ + 150	℃
Power Dissipation	P_D	200	Mw
Detecting Voltage Temperature Coefficient	$\Delta V_{DET}/\Delta T$	R_L = 200Ω , ± 0.01	%/℃

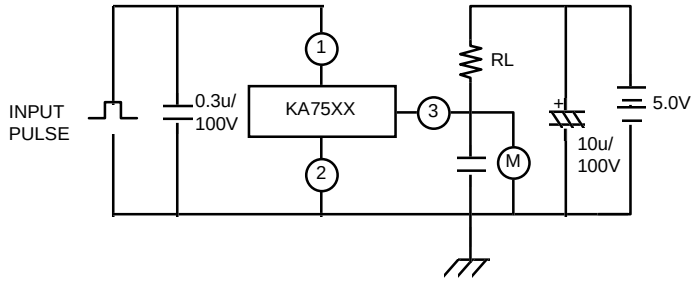
ELECTRICAL CHARACTERISTICS (T_A = 25℃)

Characteristic	Symbol	Test Conditions		Min	Typ	Max	Unit
Detecting Voltage	V_{DET}	R_L = 200Ω	KA75250	2.35	2.5	2.65	V
		$V_{OL} \leq$ 0.4V	KA75270	2.55	2.7	2.85	
			KA75290	2.75	2.9	3.05	
			KA75310	2.95	3.1	3.25	
			KA7533	3.15	3.3	3.45	
			KA7536	3.45	3.6	3.75	
			KA7539	3.75	3.9	4.05	
			KA7542	4.05	4.2	4.35	
			KA7545	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	$\Delta V_{DET}/\Delta T$	R_L = 200Ω			± 0.01		%/℃
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 , $V_{OL} \leq$ 0.4V		0.6	0.8	1.0	V
“L” Transmission Delay Time	t_{OL}	R_L = 1.0KΩ , C_L = 100pF		-	10	-	μS
“H” Transmission Delay Time	t_{OH}	R_L = 1.0KΩ , C_L = 100pF		-	15	20	μS
Output Current (at on time I)	I_{OLI}	$V_{CC} = V_{DET(MIN)}$ - 0.05V, T_C = 25℃		7	17	27	mA
Output Current (at on time II)	I_{OLII}	$V_{CC} = V_{DET(MIN)}$ - 0.05V, T_C = -30 ~ + 75℃		8	16	30	mA

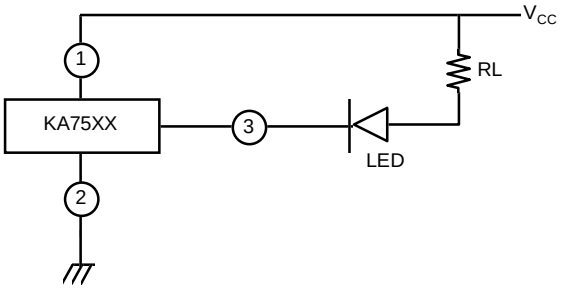
TEST CIRCUIT 1.



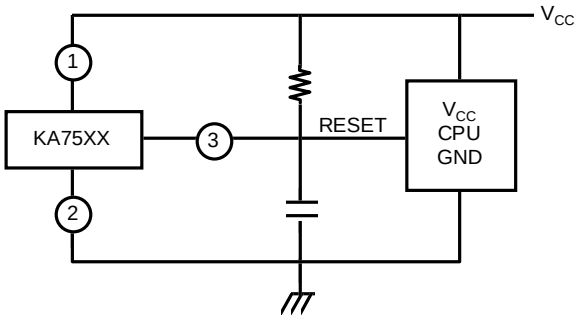
TEST CIRCUIT 2.



TEST CIRCUIT 3.



APPLICATION CIRCUIT



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