

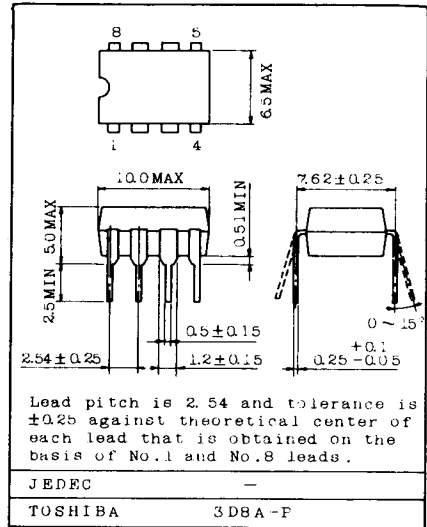
VOLTAGE COMPARATOR

The TA75393AP consists of two independent voltage comparators with an output sink current specification as low as 60mA Min for both comparators.

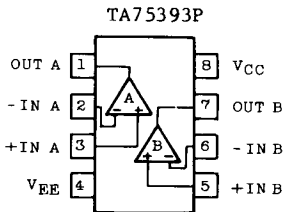
These were designed to operate from a single power supply over a wide range of voltage. Normal operation from dual supplies is also to be guaranteed on voltage range from 2V to 36V. V_{CC} is necessary at least 1.5 volts more than the input common mode voltage.

The output can be connected to other open collector outputs to achieve Wired-OR relationship and it can drive relays or lamps.

Unit in mm



PIN CONNECTION (TOP VIEW)



MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

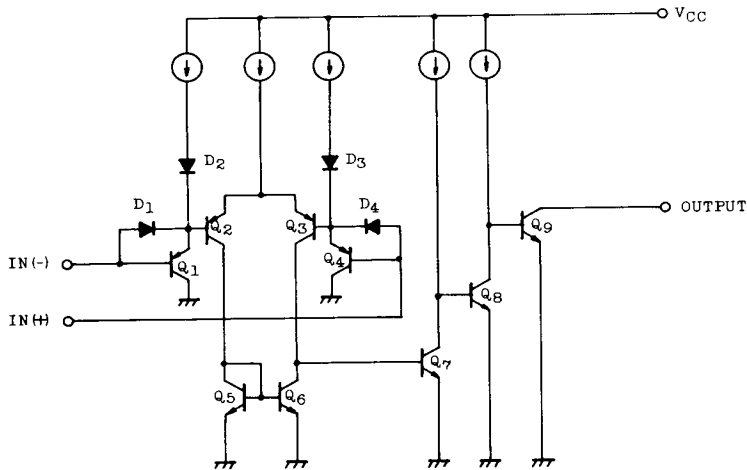
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}	$\pm 18\sim 36$	V
Differential Input Voltage	DV_{IN}	± 30	V
Common Mode Input Voltage	CMV_{IN}	$-0.3\sim V_{CC}$	V
Power Dissipation	P_D	500	mW
Operating Temperature	T_{opr}	$-40\sim 85$	$^\circ\text{C}$
Storage Temperature	T_{stg}	$-55\sim 125$	$^\circ\text{C}$

TA75393AP

ELECTRICAL CHARACTERISTICS ($V_{CC}=5V$, $T_a=25^\circ C$)

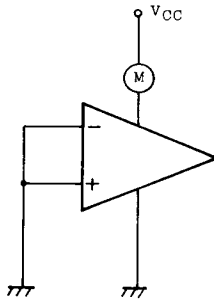
CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V_{IO}	4	-	-	2	7	mV
Input Bias Current	I_I	2	-	-	25	250	nA
Input Offset Current	I_{IO}	2	-	-	5	70	nA
Common Mode Input Voltage	CMV_{IN}	4	-	0	-	$V_{CC}-1.5$	V
Voltage Gain	G_v	-	$R_L=15k\Omega$	-	200	-	V/mV
Supply Current	I_{CC}	1	No load	-	5.5	8.0	mA
Sink Current	I_{sink}	5	$IN(+)=0V$, $IN(-)=1V$ $V_{OL}=1.5V$	65	100	-	mA
Output Voltage ("L" Level)	V_{OL}	5	$IN(+)=0V$, $IN(-)=1V$ $I_{sink}=60mA$	-	0.2	0.4	V
Output Leak Current	I_{LEAK}	3	$IN(+)=1V$, $IN(-)=0V$ $V_O=5V$	-	0.1	-	nA
Response Time	t_{rsp}	6	$R_L=82\Omega$, $C_L=15pF$	-	1.3	-	μs

EQUIVALENT CIRCUIT

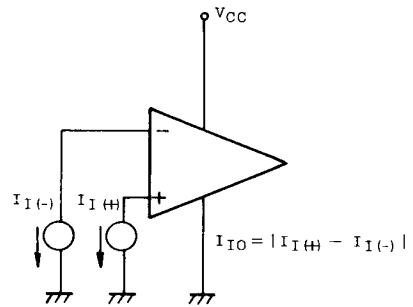


TEST CIRCUIT

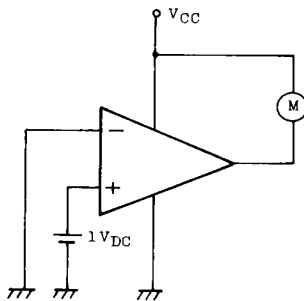
(1) I_{CC}



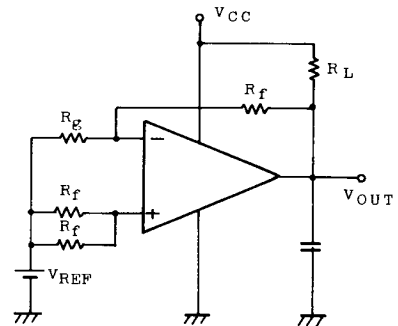
(2) I_I, I_{IO}



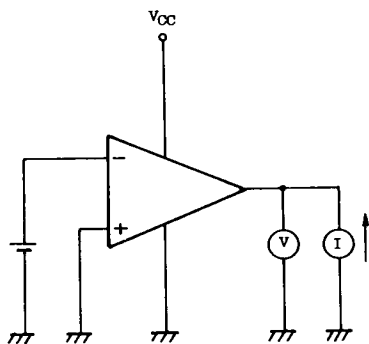
(3) I_{LEAK}



(4) $V_{IO}, CMVIN$



(5) $I_{\text{sink}}, V_{\text{OL}}$



(6) t_{rsp}

