

DUAL VOLTAGE COMPARATORS

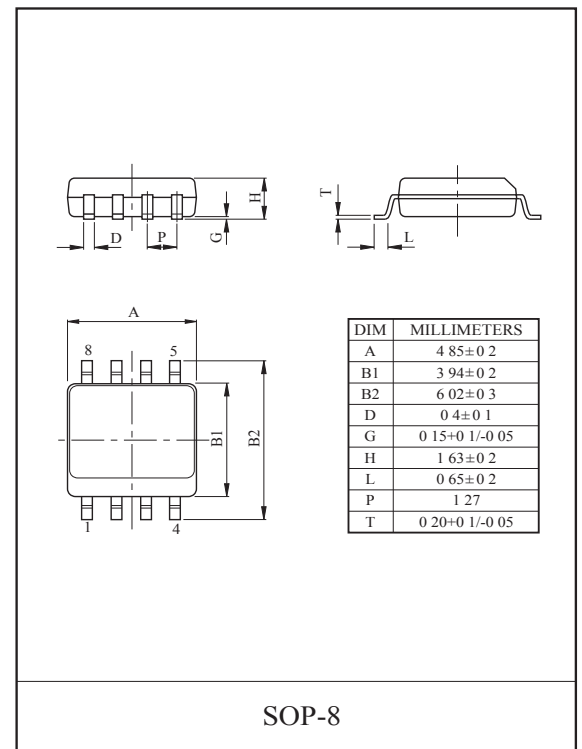
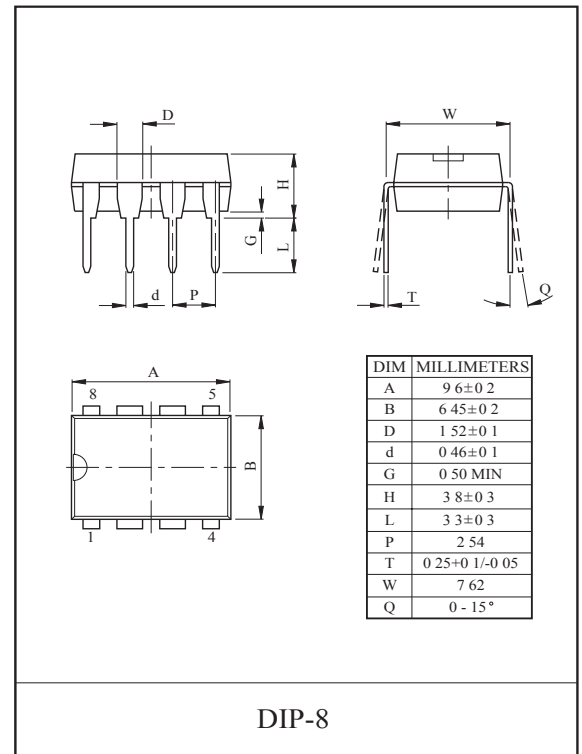
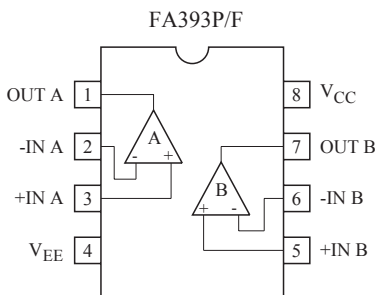
This device consists of two independent voltage comparators that are designed to operate from a single power supply over a wide range of voltage. Normal operation from dual supplies is also guaranteed on a voltage range from 2V to 36V.

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 a Wired-OR relationship.

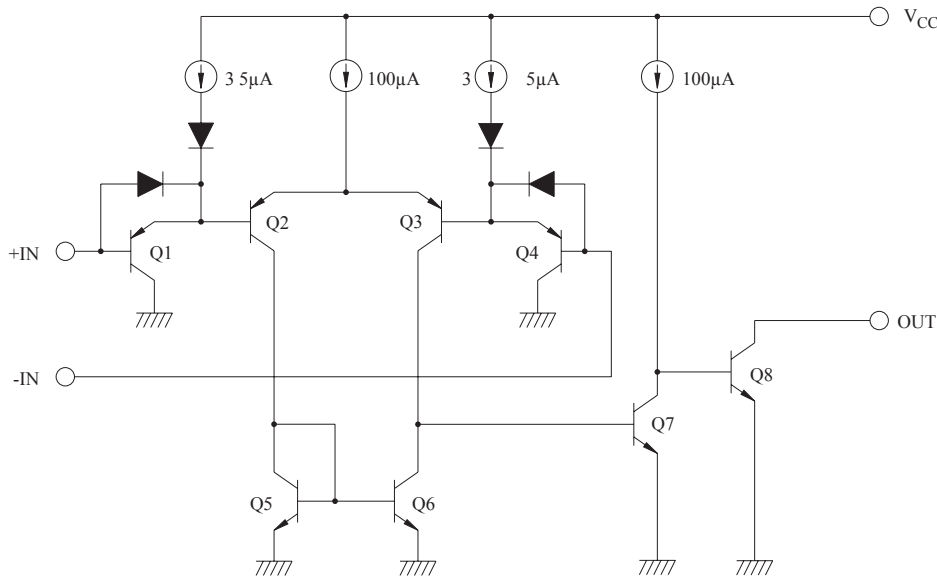
DUAL COMPARATOR

- Be Possible to Operate at the Wide Range Single or Two Supply Voltage.
- Low Supply Current : $I_{CC}=0.8mA(Typ.)$.
- Low Input Offset Voltage : $V_{IO}=2mV(Typ.)$.
- Wide Common Mode Input Voltage : $0V_{DC}$ to $V_{CC}-1.5V_{DC}$
- Output is Compatible with TTL, DTL, MOS and C-MOS.
- Low Output Saturation Voltage

PIN CONNECTION (TOP VIEW)



EQUIVALENT CIRCUIT



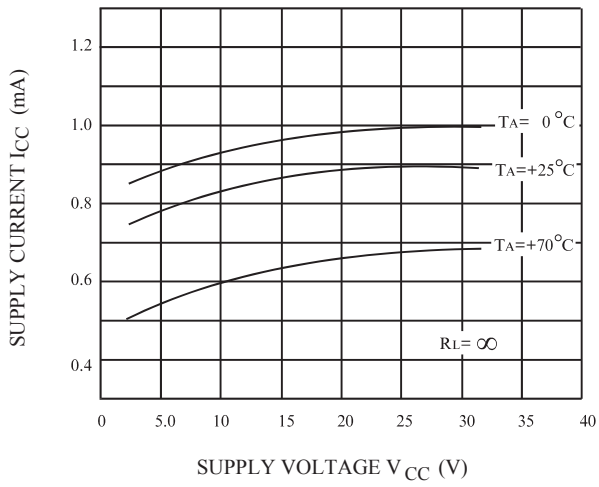
MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Supply Voltage		V_{CC}	$\pm 18, 36$	V
Differential Input Voltage		DV_{IN}	$\pm 18, 36$	V
Common Mode Input Voltage		CMV_{IN}	$-0.3 \sim V_{CC}$	V
Power Dissipation	FA393P	P_D	500	mW
	FA393F		240	
Operating Temperature		T_{opr}	$-40 \sim 85$	°C
Storage Temperature		T_{stg}	$-55 \sim 125$	°C

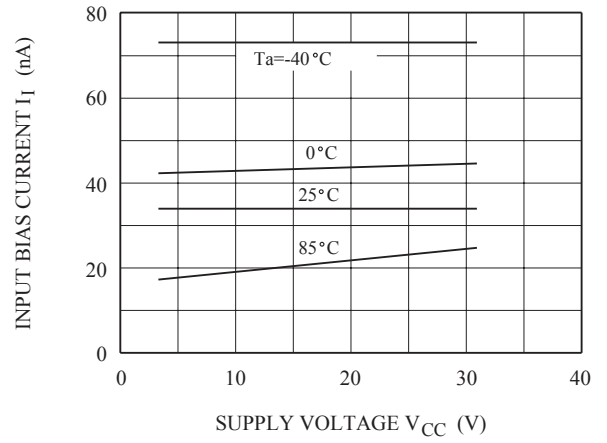
ELECTRICAL CHARACTERISTICS ($V_{CC}=5V$, $V_{EE}=GND$, $T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V_{IO}	$V_O=1.4V$	-	-	5	mV
Input Offset Current	I_{IO}	-	-	-	50	nA
Input Bias Current	I_I	-	-	-	250	nA
Common Mode Input Voltage	CMV_{IN}	-	0	-	$V_{CC}-1.5$	V
Voltage Gain	G_V	$R_L=15k\Omega$, $V_{CC}=15V$	-	200	-	V/mV
Supply Current	I_{CC}	No load	-	-	1	mA
Sink Current	I_{sink}	+IN=0V, -IN=1V, $V_{OL}=1.5V$	6	16	-	mA
Output Voltage ("L" Level)	V_{OL}	+IN=0V, -IN=1V, $I_{sink}=3mA$	-	-	0.7	V
Output Leak Current	I_{LEAK}	+IN=1V, -IN=0V, $V_O=5V$	-	0.1	-	nA
Response Time	t_{rsp}	$R_L=5.1k\Omega$, $C_L=15pF$	-	1.3	-	μs

V - I



$V_{CC} - I_I$



$V_{OL} - I_{SINK}$

