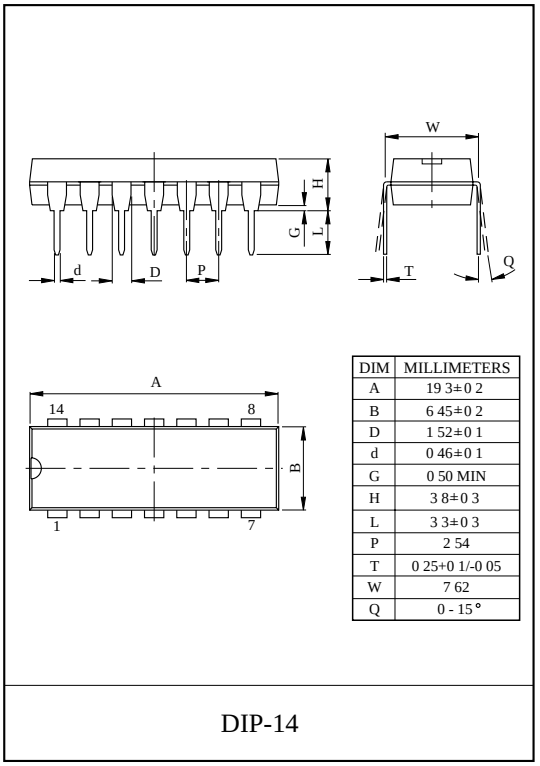
QUAD VOLTAGE COMPARATORS

This device consist of for independent voltage comparators that designed to operated from a single power supply over a wide range of voltage. Normal operation from dual supplies are also to be guaranteed on voltage range from 2V to 36V.

V_{CC} is necessary at least more 1.5 volts than the input common mode voltage. The output can be connected to other open collector outputs to achieve Wired-OR relationship.

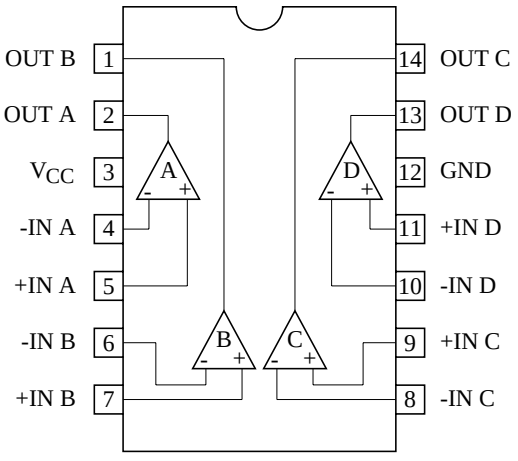


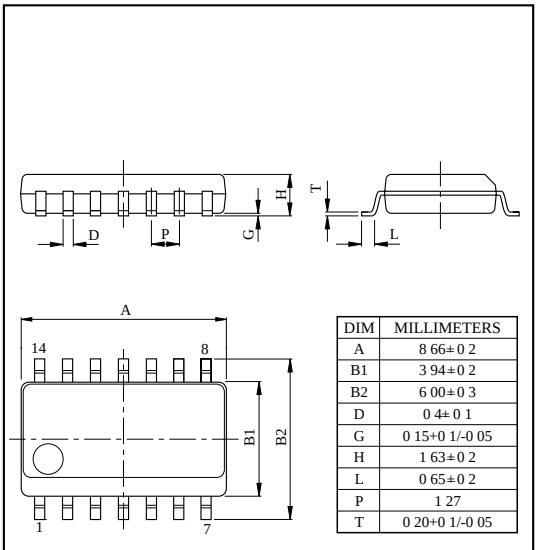
DIM	MILLIMETERS
A	19 3±0 2
B	6 45±0 2
D	1 52±0 1
d	0 46±0 1
G	0 50 MIN
H	3 8±0 3
L	3 3±0 3
P	2 54
T	0 25+0 1/-0 05
W	7 62
Q	0 - 15°

DIP-14

- Single Supply Voltage Range or Dual Supplies.
  : $2V_{DC}$ to $36V_{DC}$ or $\pm 18V_{DC}$
- Low Supply Current : 0.8mA (Typ.)
- Low Input Offset Voltage : ±2mV (Typ.)
- Wide Input Common Mode Voltage Range .
  : $0V_{DC}$ to V_{CC}-$1.5V_{DC}$
- Output Compatible With TTL, DTL, MOS and CMOS Logic System.
- Low Output Saturation Voltage

PIN CONNECTION (TOP VIEW)





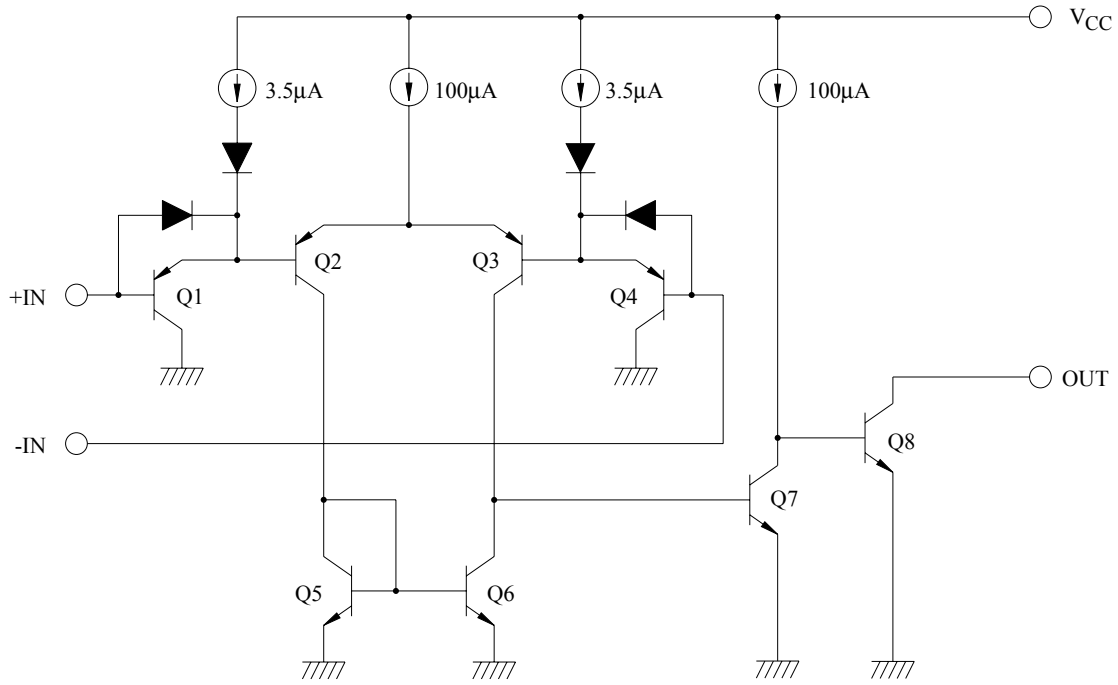
DIM	MILLIMETERS
A	8 66±0 2
B1	3 94±0 2
B2	6 00±0 3
D	0 4±0 1
G	0 15+0 1/-0 05
H	1 63±0 2
L	0 65±0 2
P	1 27
T	0 20+0 1/-0 05

SOP-14

MAXIMUM RATINGS (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Supply Voltage		V_{CC}	-18, 36	V
Differential Input Voltage		DV_{IN}	-18, 36	V
Common Mode Input Voltage		CMV_{IN}	-0.3 ~ V_{CC}	V
Power Dissipation	FA339P	P_D	625	mW
	FA339F		280	
Operating Temperature		T_{opr}	-40 ~ 85	℃
Storage Temperature		T_{stg}	-55 ~ 125	℃

EQUIVALENT CIRCUIT

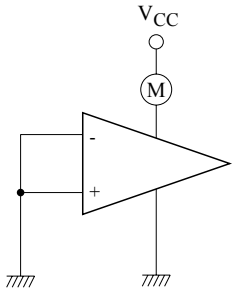


ELECTRICAL CHARACTERISTICS (V_{CC}=5V, V_{EE}=GND, Ta=25 ℃)

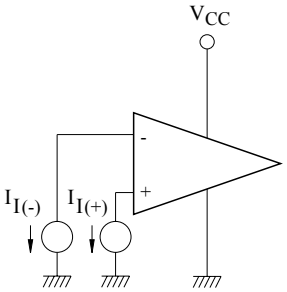
CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V_{IO}	4	V_O=1.4V	-	-	5	mV
Input Offset Current	I_{IO}	2	-	-	-	50	nA
Input Bias Current	I_I	2	-	-	-	250	nA
Common Mode Input Voltage	CMV_{IN}	4	-	0	-	V_{CC}-1.5	V
Voltage Gain	G_V	-	R_L=15kΩ	-	200	-	V/mV
Supply Current	I_{CC}	1	No load	-	-	1	mA
Sink Current	I_{sink}	5	+IN=0V, -IN=1V, V_{OL}=1.5V	6	-	-	mA
Output Voltage ("L" Level)	V_{OL}	5	+IN=0V, -IN=1V, I_{sink}=3mA	-	-	0.7	V
Output Leak Current	I_{LEAK}	3	+IN=1V, -IN=0V, V_O=5V	-	0.1	-	nA
Response Time	t_{rsp}	6	R_L=5.1kΩ , C_L=15pF	-	1.3	-	μs

TEST CIRCUIT

(1) I_{CC}

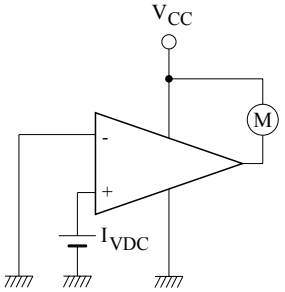


(2) I_I , I_{IO}

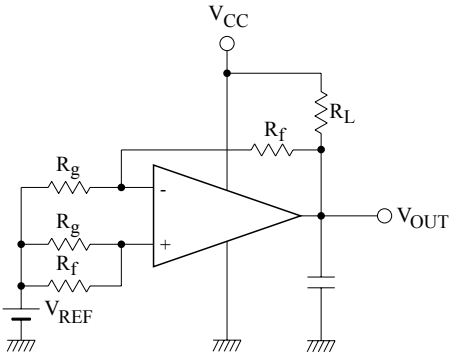


I_{Io}=| $I_{I(+)}$ - $I_{I(-)}$ |

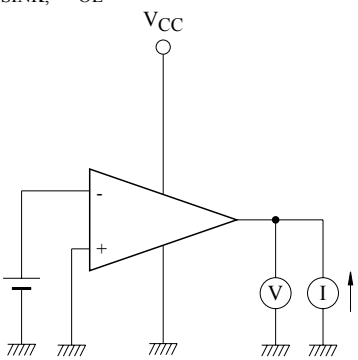
(3) I_{LEAK}



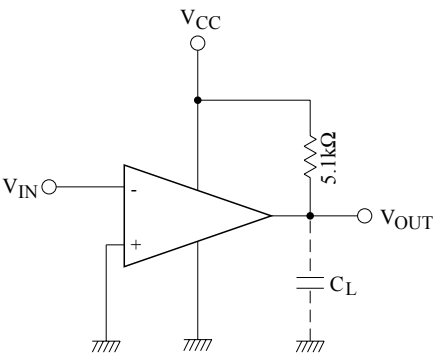
(4) V_{IO} , CMV_{IN}



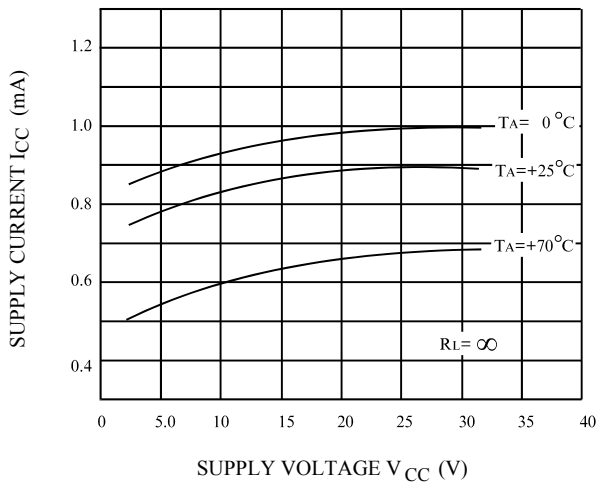
(5) I_{SINK}, V_{OL}



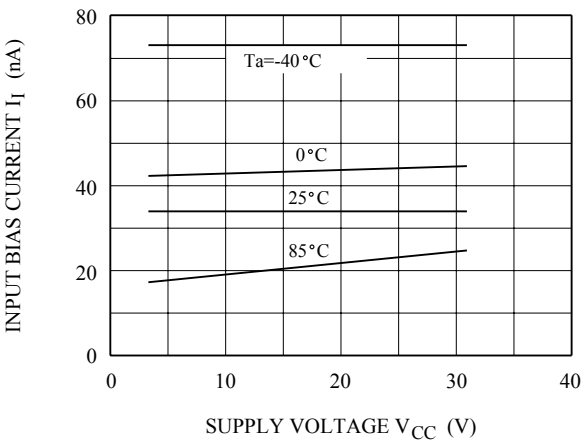
(6) t_{rsp}



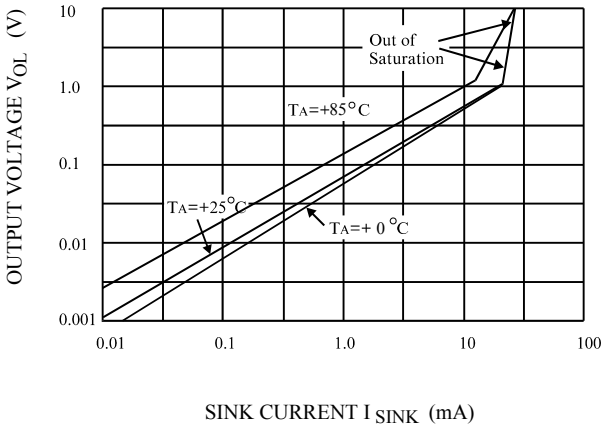
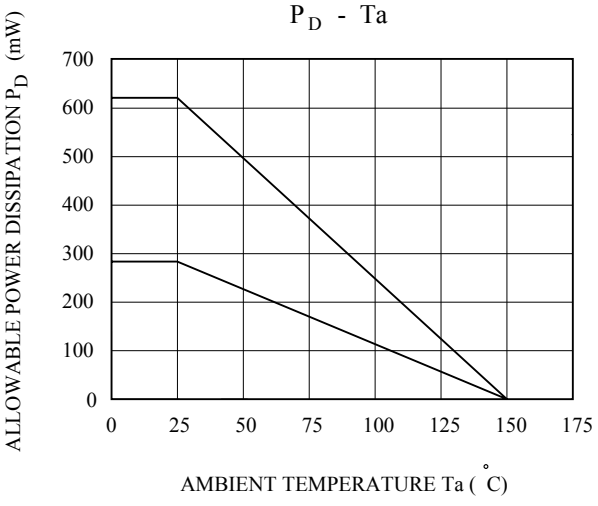
V - I



V_{CC} - I_I



V_{OL} - I_{SINK}



P_D - Ta