

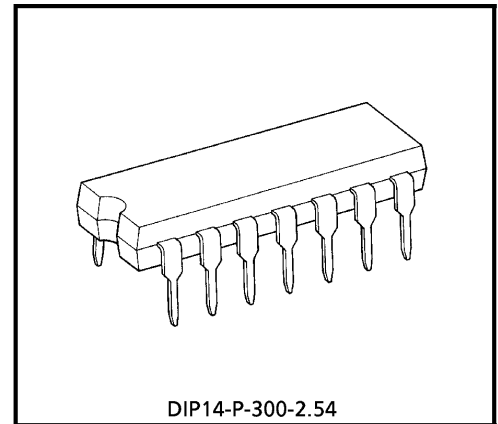
# TA75339AP

## QUAD COMPARATOR

The TA75339AP consists of four independent voltage comparators with an output sink current specification as low as 60mA Min. for all four 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 more 1.5V 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.



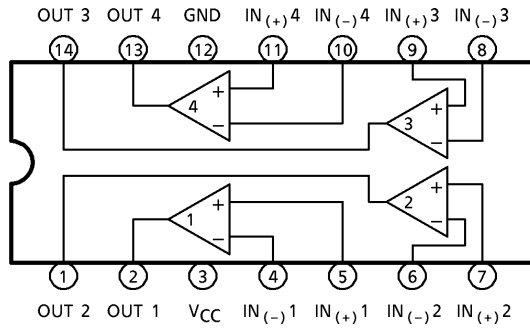
Weight : 1.0g (Typ.)

### FEATURES

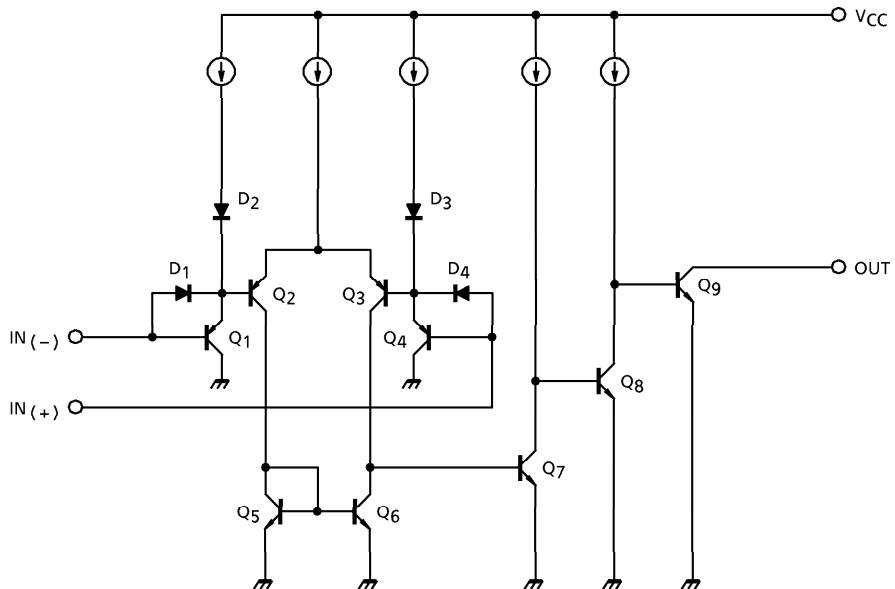
- Single Supply Voltage Range or Dual Supplies : 2V~36V or  $\pm 1V \sim \pm 18V$
- Output Sink Current : 100mA (Typ.)
- Low Input Offset Voltage :  $\pm 2mV$  (Typ.)
- Wide Input Common Mode Voltage Range : 0V~ $V_{CC} - 1.5V$
- Output Compatible with TTL, DTL, MOS and CMOS Logic System.
- The Output can be Connected to Achieve Wired-OR Relation.

**PIN CONNECTION (TOP VIEW)**

TA75339AP



**EQUIVALENT CIRCUIT**



## MAXIMUM RATINGS (Ta = 25°C)

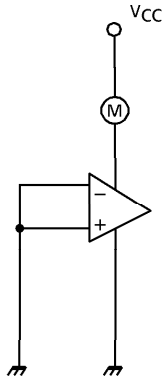
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V <sub>CC</sub>	± 18~36	V
Differential Input Voltage	DV <sub>IN</sub>	± 36	V
Common Mode Input Voltage	CMV <sub>IN</sub>	- 0.3~V <sub>CC</sub>	V
Power Dissipation	P <sub>D</sub>	625	mW
Operating Temperature	T <sub>opr</sub>	- 40~85	°C
Storage Temperature	T <sub>stg</sub>	- 55~125	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C, V<sub>CC</sub> = 5V)

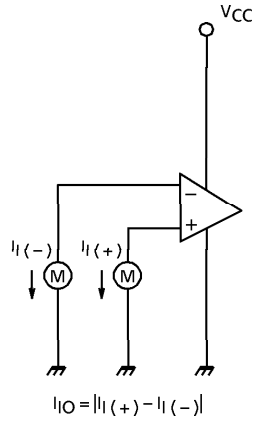
CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V <sub>IO</sub>	—	—	—	2	10	mV
Input Bias Current	I <sub>I</sub>	—	—	—	25	250	nA
Input Offset Current	I <sub>IO</sub>	—	—	—	5	70	nA
Common Mode Input Voltage	CMV <sub>IN</sub>	—	—	0	—	V <sub>CC</sub> - 1.5	V
Voltage Gain	G <sub>V</sub>	—	R <sub>L</sub> = 15kΩ	—	200	—	V/mV
Supply Current	I <sub>CC</sub>	—	no load	—	11	22	mA
Sink Current	I <sub>SINK</sub>	—	IN (+) = 0V, IN (-) = 1V, V <sub>OL</sub> = 1.5V	—	100	—	mA
Output Voltage ("L" level)	V <sub>OL</sub>	—	IN (+) = 0V, IN (-) = 1V, I <sub>SINK</sub> = 60mA	—	0.2	0.6	V
Output Leak Current	I <sub>LEAK</sub>	—	IN (+) = 1V, IN (-) = 0V, V <sub>O</sub> = 5V	—	0.1	—	nA
Response Time	t <sub>rsp</sub>	—	R <sub>L</sub> = 82Ω, C <sub>L</sub> = 15pF	—	1.0	—	μs

TEST CIRCUIT

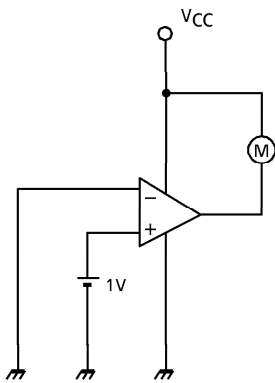
(1)  $I_{CC}$



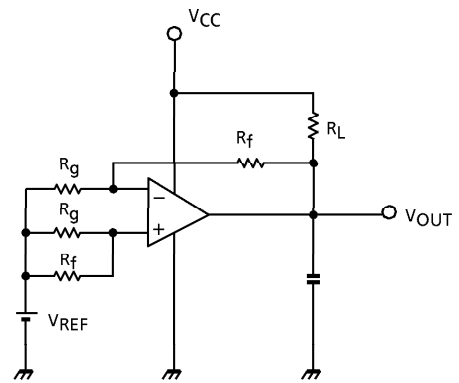
(2)  $I_I, I_{IO}$



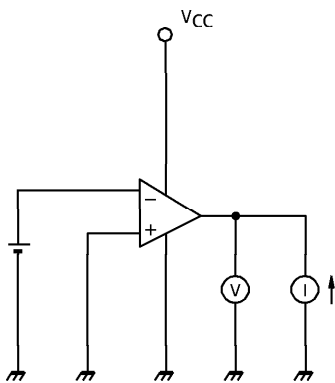
(3)  $I_{LEAK}$



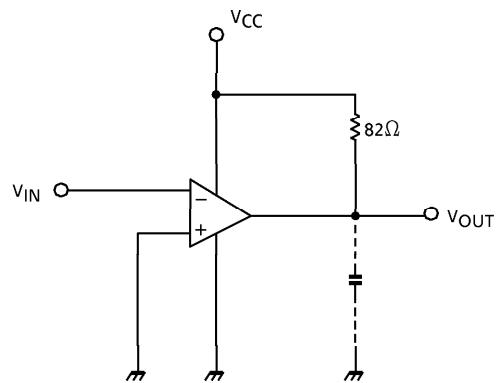
(4)  $V_{IO}, CMV_{IN}$



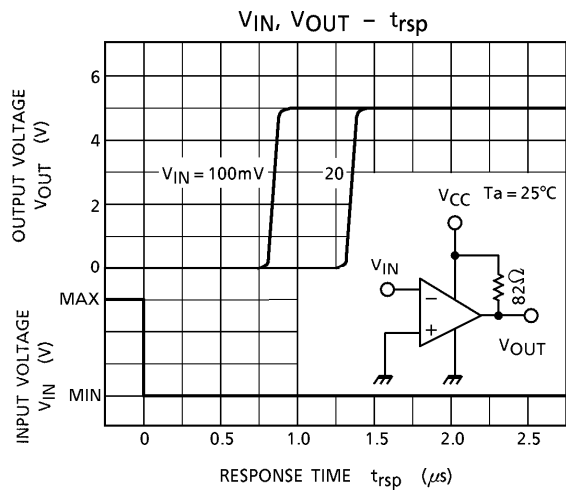
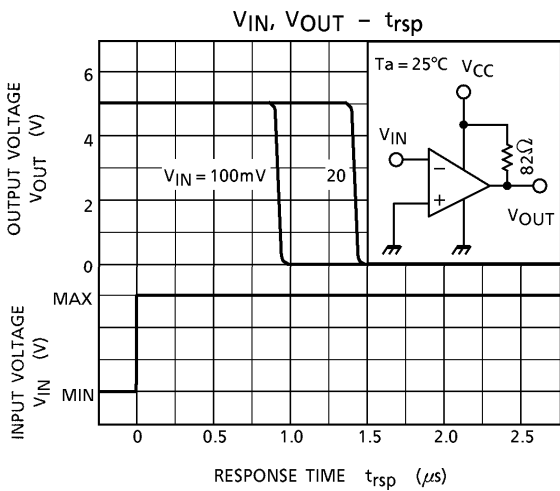
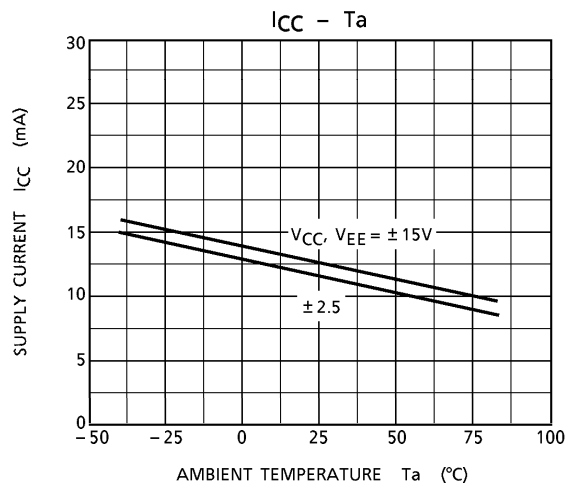
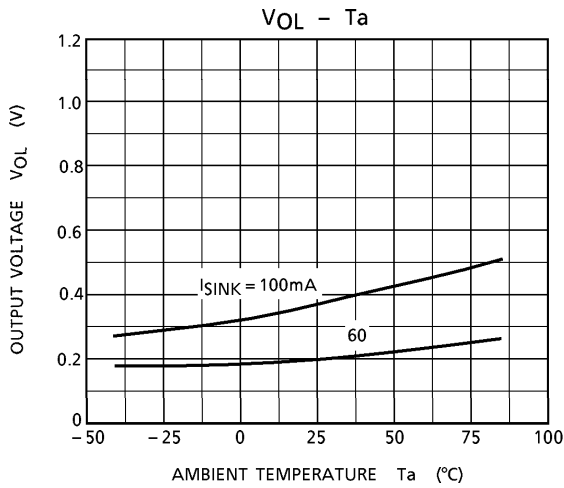
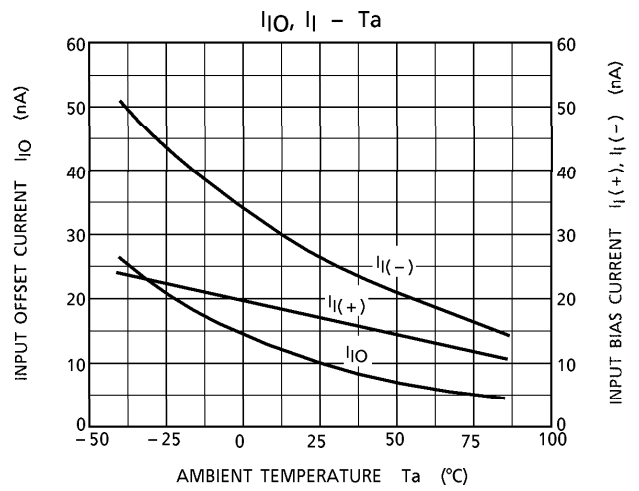
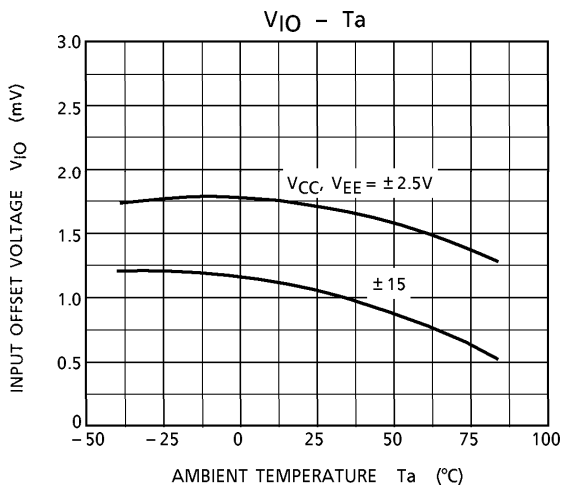
(5)  $I_{SINK}, V_{OL}$



(6)  $t_{rsp}$

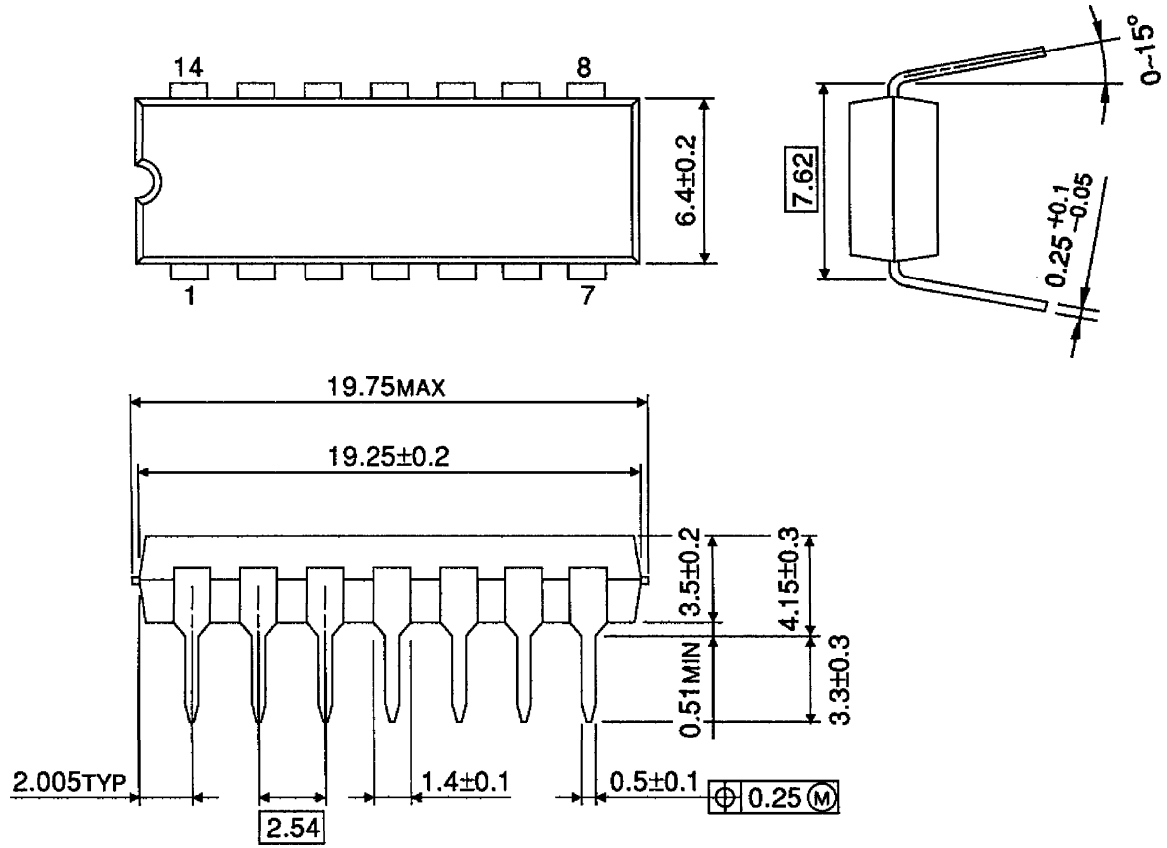


CHARACTERISTICS



**PACKAGE DIMENSIONS**  
DIP14-P-300-2.54

Unit : mm



Weight : 1.0g (Typ.)

**RESTRICTIONS ON PRODUCT USE**

000707EBA

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