

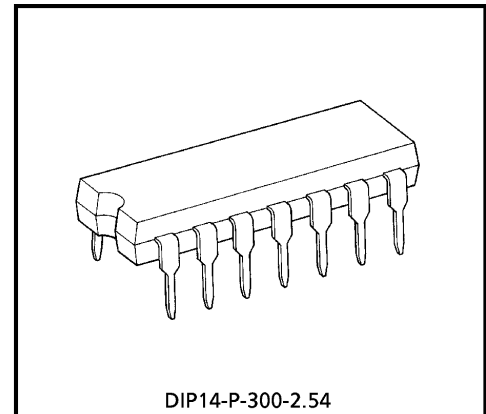
TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

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.



DIP14-P-300-2.54

Weight : 1.0g (Typ.)

FEATURES

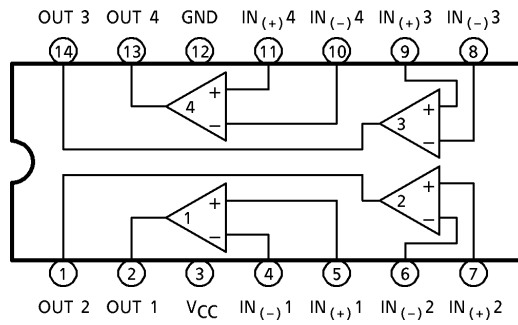
- Single Supply Voltage Range or Dual Supplies : 2V~36V or $\pm 1V \sim \pm 18V$
- Output Sink Current : 100mA (Typ.)
- Low Input Offset Voltage : $\pm 2mV$ (Typ.)
- Wide Input Common Mode Voltage Range : 0V~ $V_{CC} - 1.5V$
- Output Compatible with TTL, DTL, MOS and CMOS Logic System.
- The Output can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

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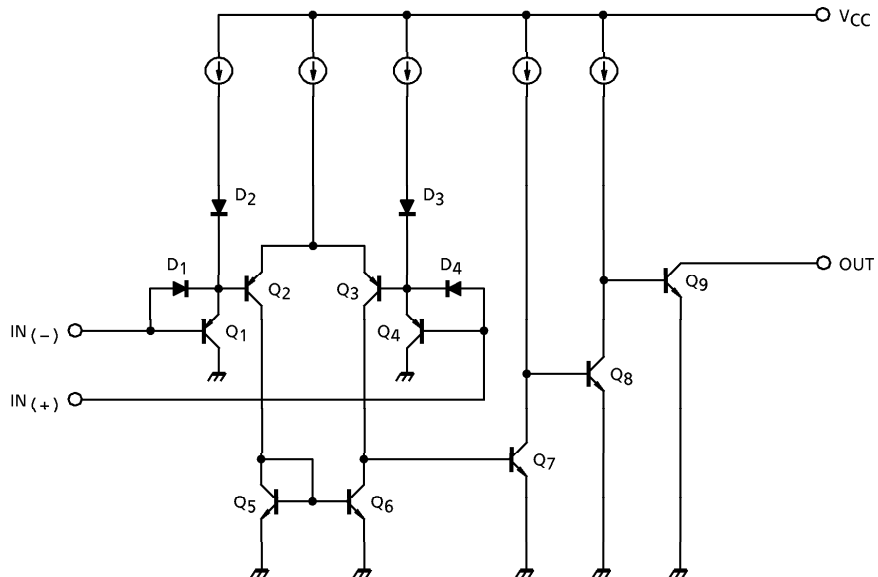
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PIN CONNECTION (TOP VIEW)

TA75339AP



EQUIVALENT CIRCUIT



MAXIMUM RATINGS (Ta = 25°C)

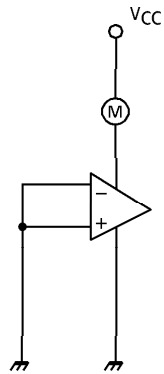
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{CC}	± 18~36	V
Differential Input Voltage	DV _{IN}	± 36	V
Common Mode Input Voltage	CMV _{IN}	- 0.3~V _{CC}	V
Power Dissipation	P _D	625	mW
Operating Temperature	T _{opr}	- 40~85	°C
Storage Temperature	T _{stg}	- 55~125	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C, V_{CC} = 5V)

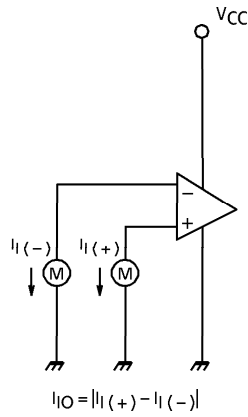
CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V _{IO}	—	—	—	2	10	mV
Input Bias Current	I _I	—	—	—	25	250	nA
Input Offset Current	I _{IO}	—	—	—	5	70	nA
Common Mode Input Voltage	CMV _{IN}	—	—	0	—	V _{CC} - 1.5	V
Voltage Gain	G _V	—	R _L = 15kΩ	—	200	—	V/mV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

TEST CIRCUIT

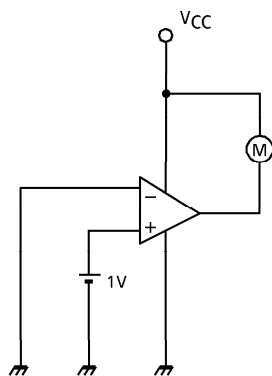
(1) I_{CC}



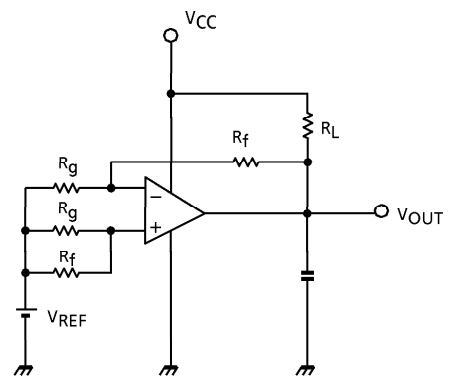
(2) I_I, I_{IO}



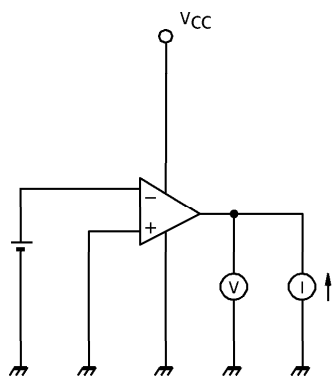
(3) I_{LEAK}



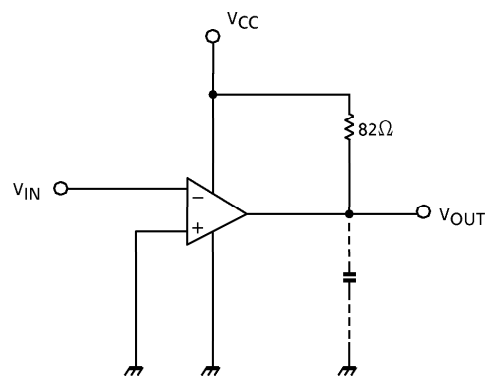
(4) V_{IO}, CMV_{IN}



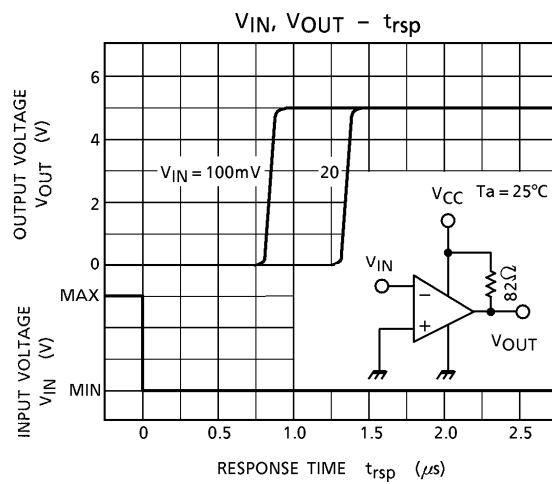
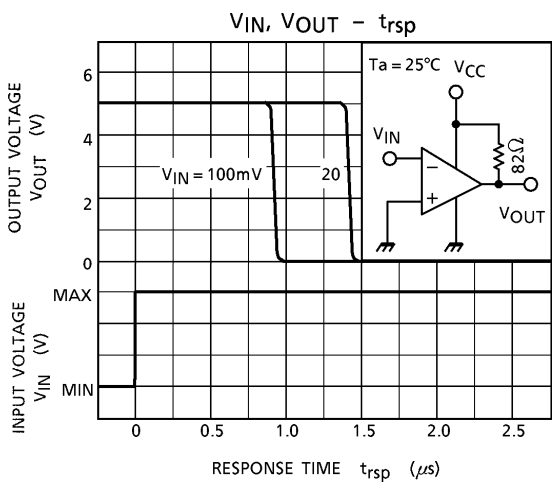
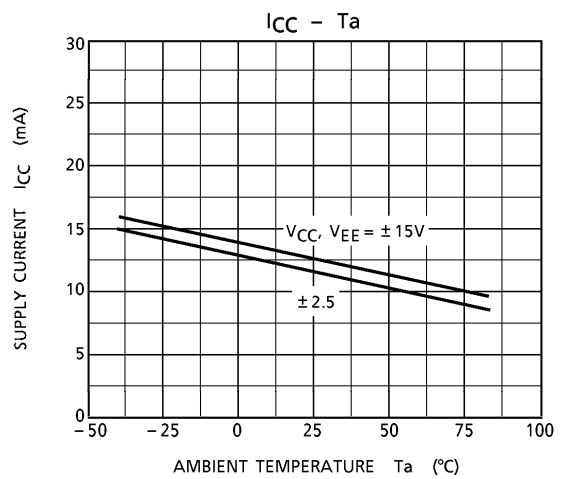
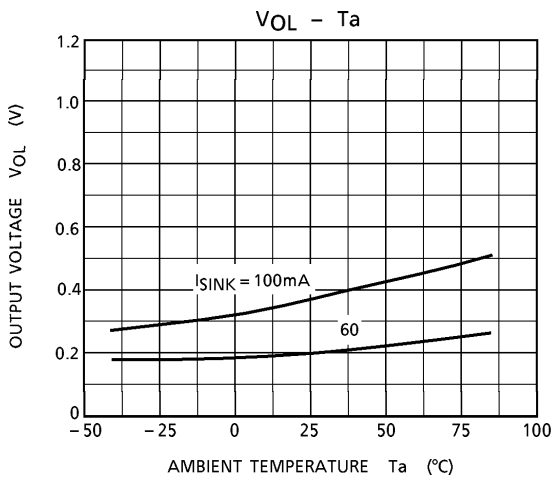
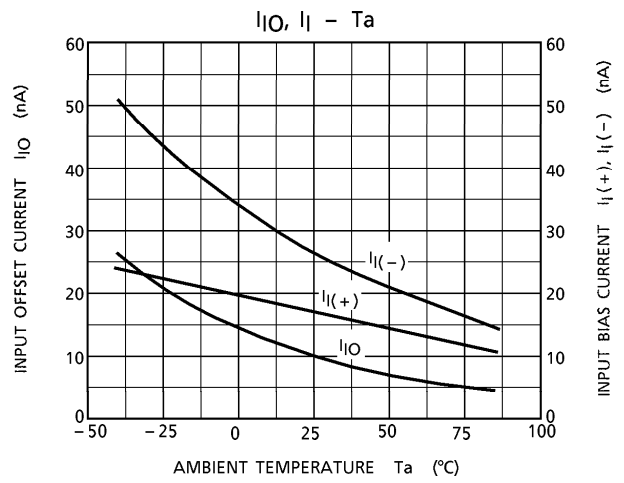
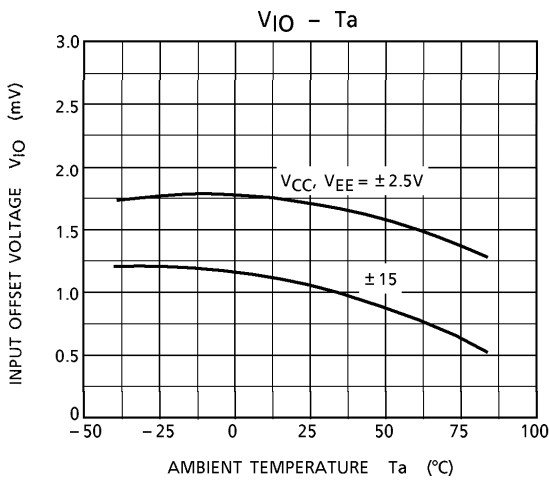
(5) I_{SINK}, V_{OL}



(6) t_{rsp}

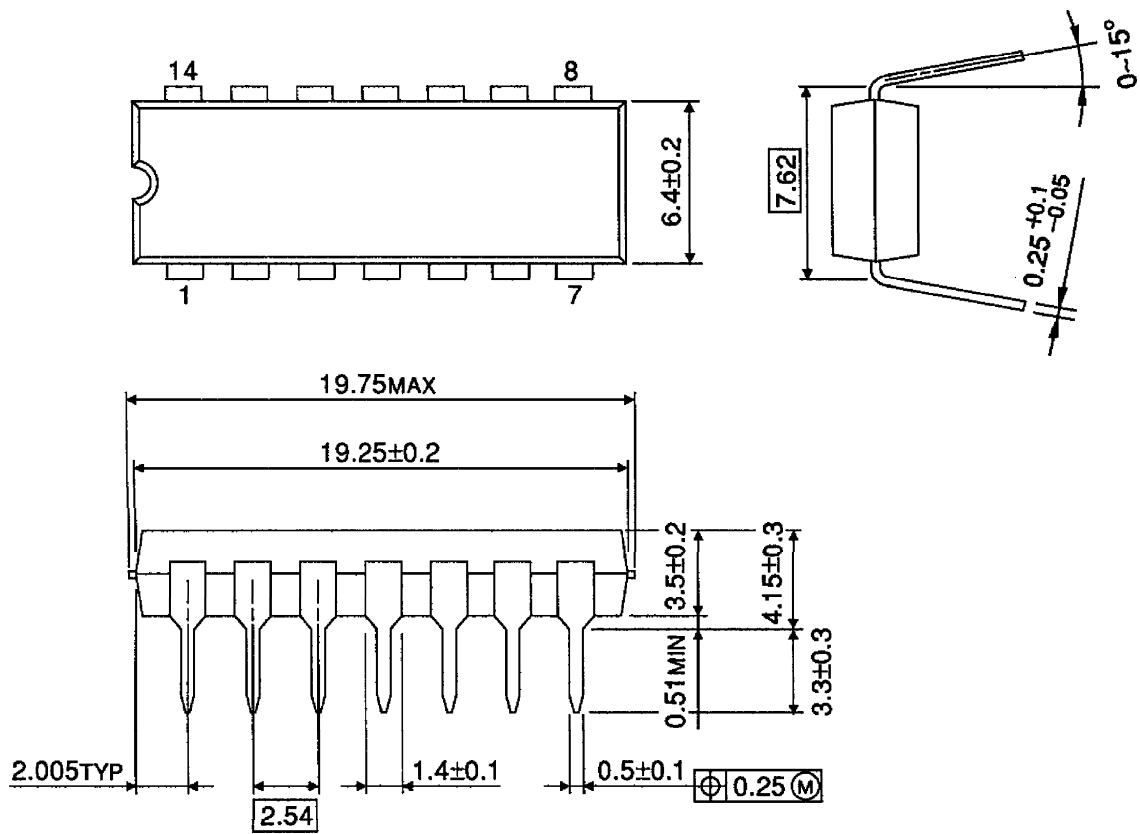


CHARACTERISTICS



OUTLINE DRAWING
DIP14-P-300-2.54

Unit : mm



Weight : 1.0g (Typ.)