

TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA75393P, TA75393PA, TA75393S, TA75393F, TA75393FB

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-54151736
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

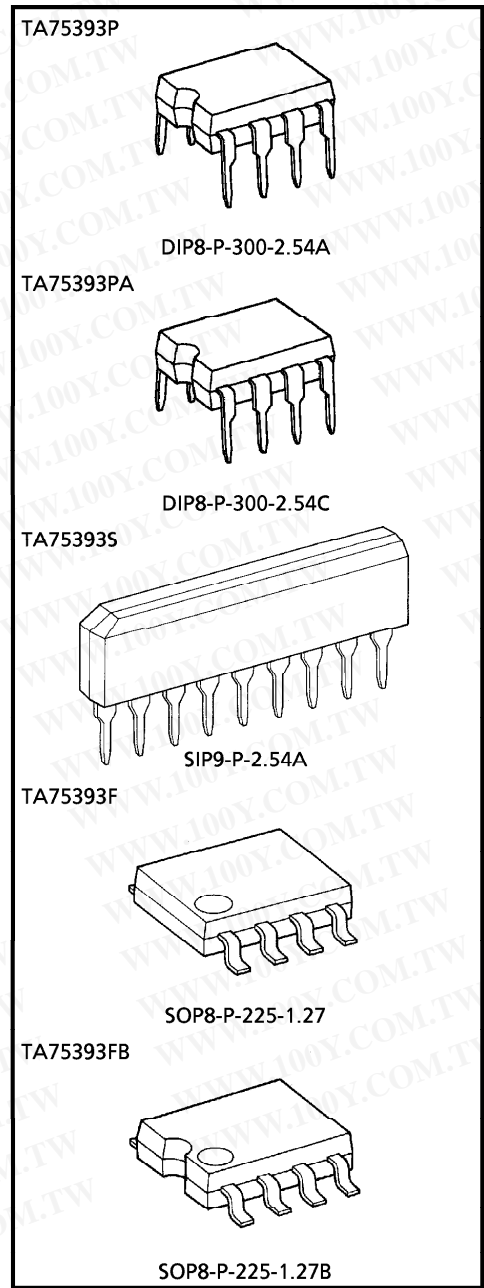
DUAL COMPARATOR

This device consist of two independent voltage comparators that 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 relation ship.

FEATURES

- Be possible to operate at the wide range single or two supply voltage.
 2~36V or $\pm 1\sim 18V$
- Low supply current : 0.8mA (Typ.)
- Low input offset voltage : $\pm 2mV$ (Typ.)
- Wide common mode input voltage : $0\sim V_{CC} - 1.5V$
- Output is compatible with TTL, DTL, MOS and C-MOS.
- Output is open collector and wired-OR possible.

| | |
|------------------|---------------|
| Weight | |
| DIP8-P-300-2.54A | : 0.5g (Typ.) |
| DIP8-P-300-2.54C | : 0.6g (Typ.) |
| SIP9-P-2.54A | : 0.9g (Typ.) |
| SOP8-P-225-1.27 | : 0.1g (Typ.) |
| SOP8-P-225-1.27B | : 0.1g (Typ.) |



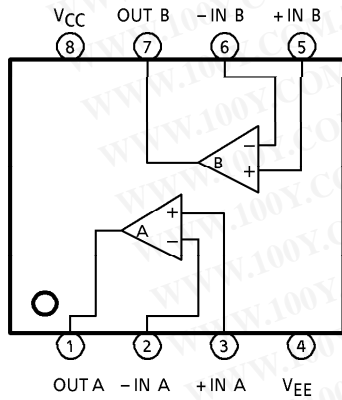
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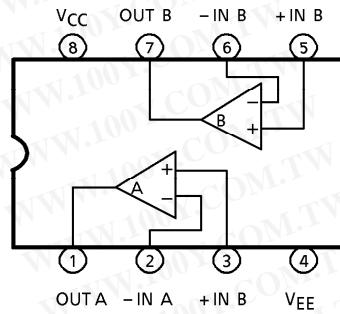
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PIN CONNECTION (TOP VIEW)

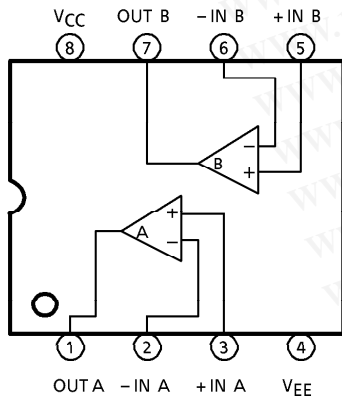
TA75393F



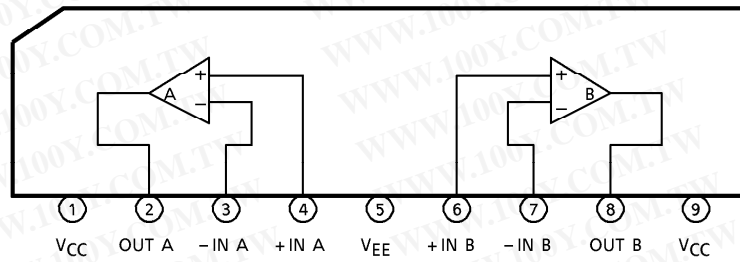
TA75393P, TA75393PA



TA75393FB



TA75393S

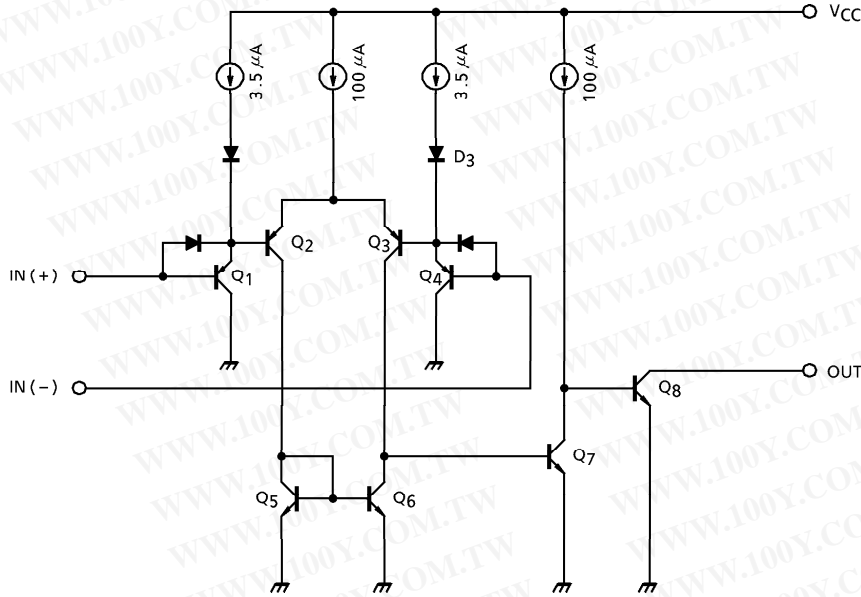


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EQUIVALENT CIRCUIT



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MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | TA75393P TA75393PA TA75393S | TA75393F TA75393FB | UNIT |
|----------------------------|-------------------|-----------------------------------|-----------------------|------|
| Supply Voltage | V _{CC} | ± 18 OR 36 | ± 18 OR 36 | V |
| Differential Input Voltage | DV _{IN} | ± 36 | ± 36 | V |
| Common Mode Input Voltage | CMV _{IN} | - 0.3~V _{CC} | - 0.3~V _{CC} | V |
| Power Dissipation | P _D | 500 | 240 | mW |
| Operating Temperature | T _{opr} | - 40~85 | - 40~85 | °C |
| Storage Temperature | T _{stg} | - 55~125 | - 55~125 | °C |

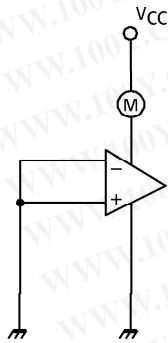
ELECTRICAL CHARACTERISTICS (V_{CC} = 5V, Ta = 25°C)

| CHARACTERISTIC | SYMBOL | TEST CIR-CUIT | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|----------------------------|-------------------|---------------|---|------|------|--------------------------|--------|
| Input Offset Voltage | V _{IO} | 4 | — | — | 2 | 5 | mV |
| Input Bias Current | I _I | 2 | — | — | 25 | 250 | nA |
| Input Offset Current | I _{IO} | 2 | — | — | 5 | 50 | 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 | — | 0.8 | 2 | mA |
| Sink Current | I _{SINK} | 5 | IN (+) = 0V, IN (-) = 1V V _{OL} = 1.5V | 6 | 16 | — | mA |
| Output Voltage ("L" Level) | V _{OL} | 5 | IN (+) = 0V, IN (-) = 1V I _{SINK} = 3mA | — | 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 = 5.1kΩ, C _L = 15pF | — | 1.3 | — | μs |

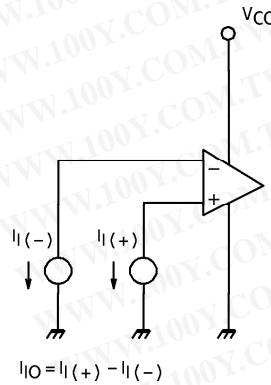
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TEST CIRCUIT

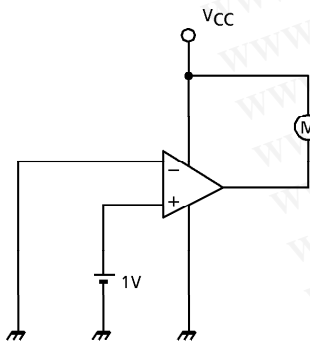
(1) I_{CC}



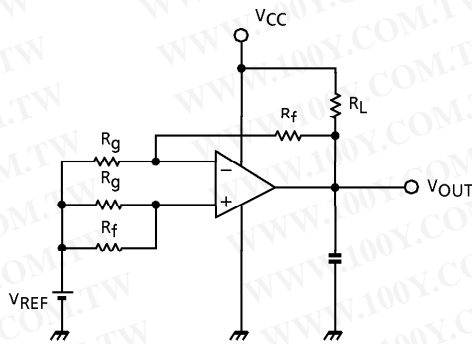
(2) I_I, I_{IO}



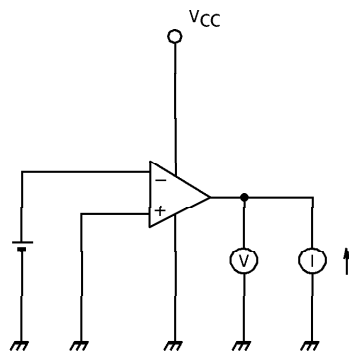
(3) I_{LEAK}



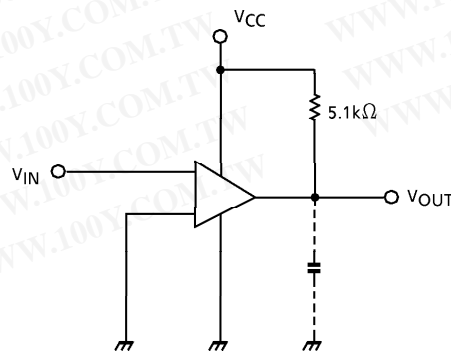
(4) V_{IO}, CMV_{IN}



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

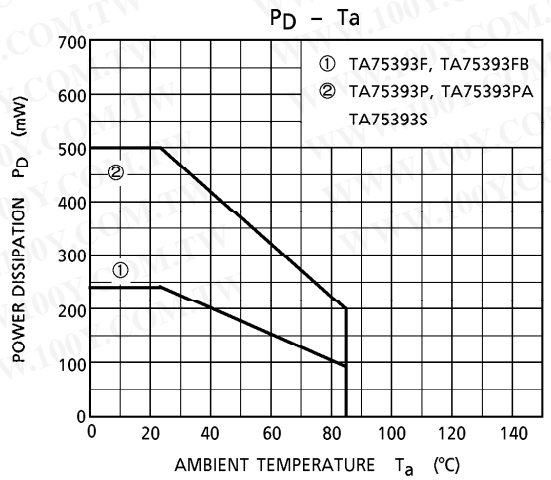
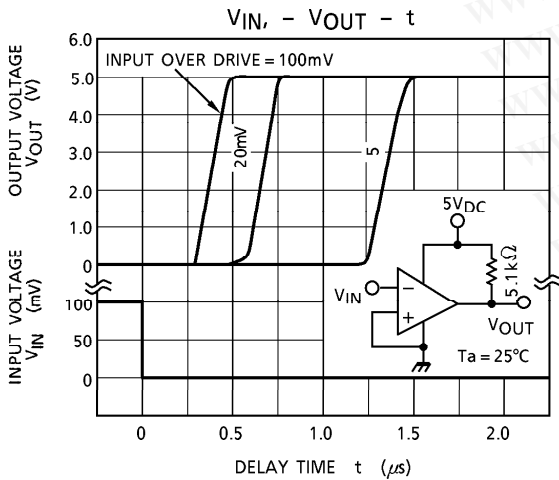
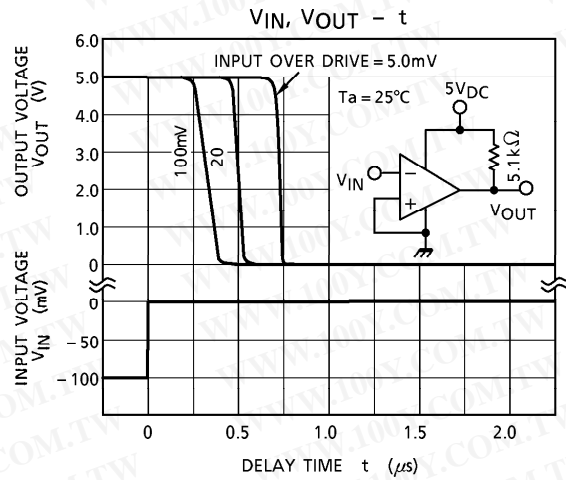
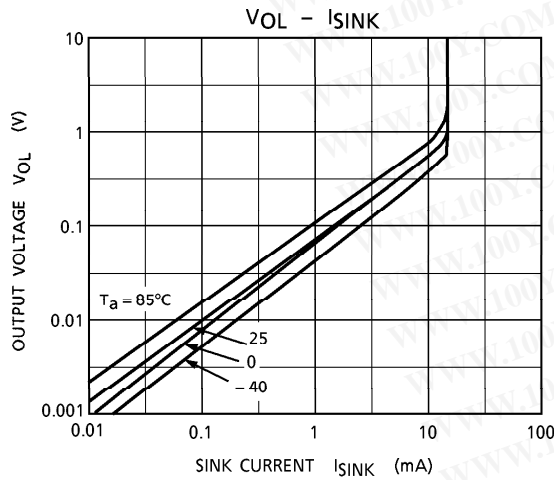
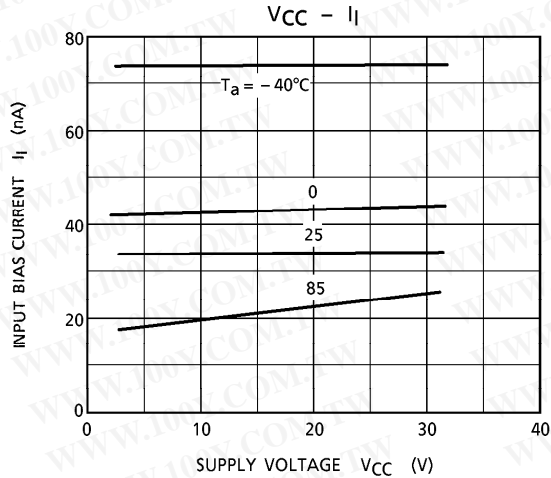
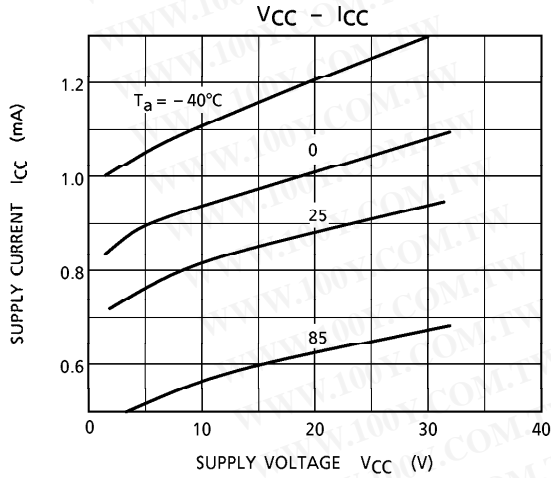


(6) t_{rsp}



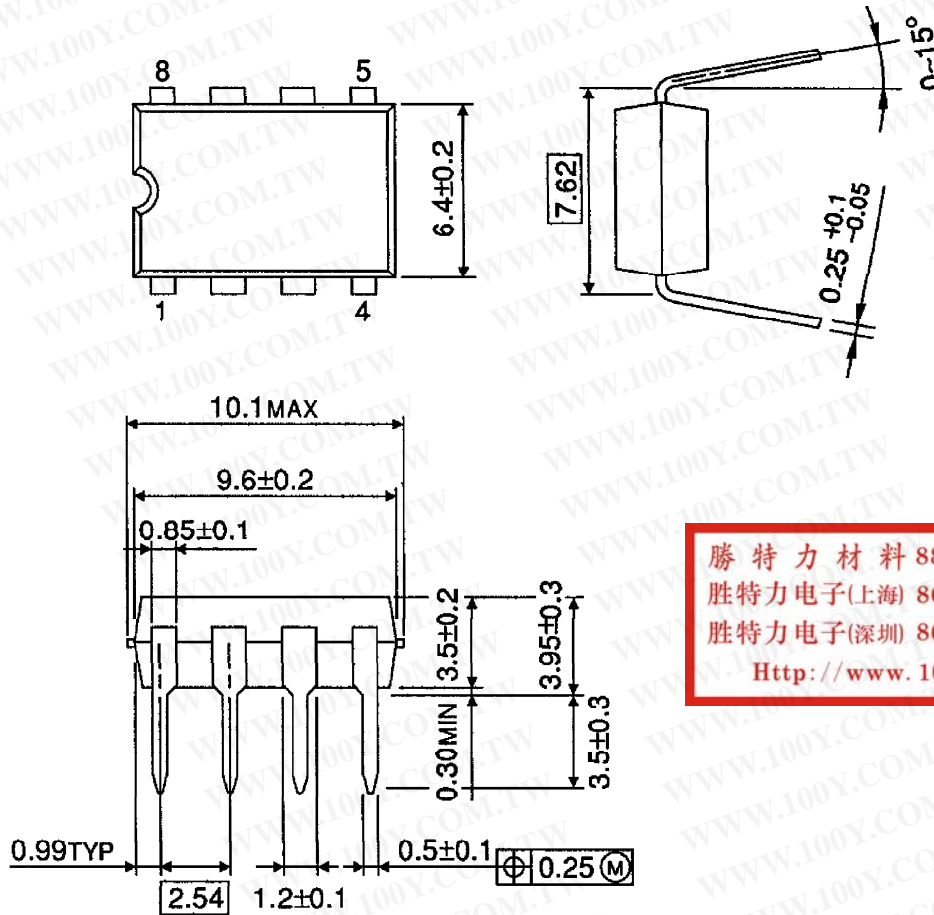
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CHARACTERISTICS



OUTLINE DRAWING
DIP8-P-300-2.54A

Unit : mm

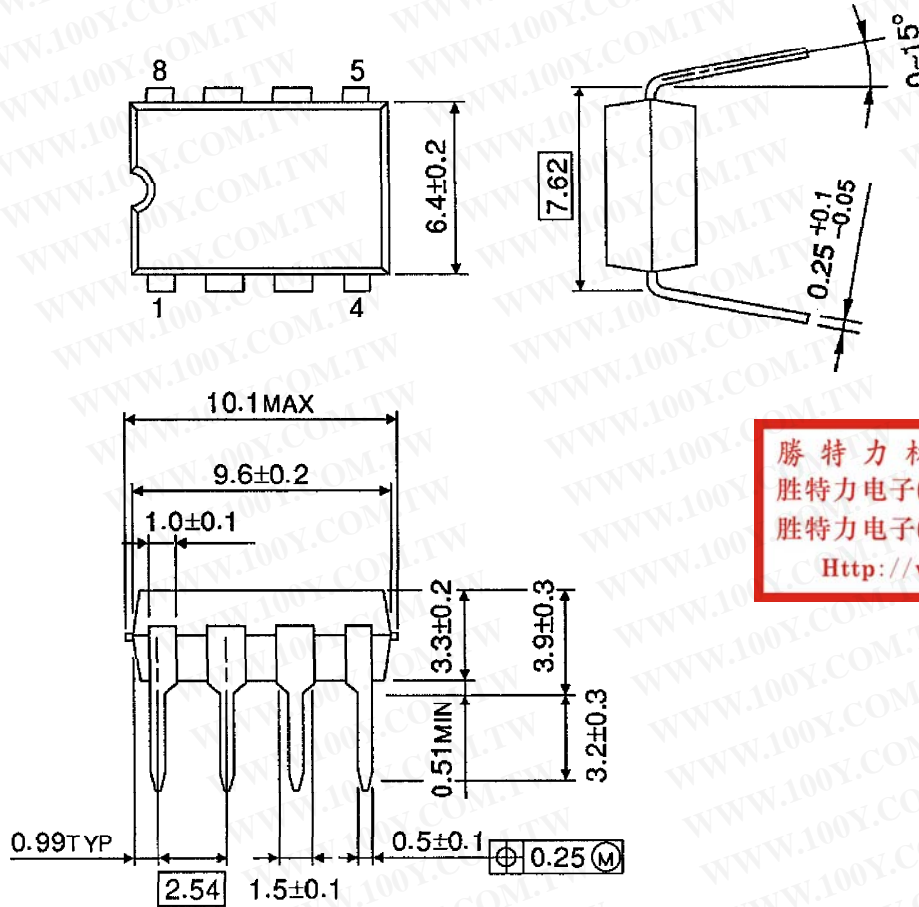


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Weight : 0.5g (Typ.)

OUTLINE DRAWING
DIP8-P-300-2.54C

Unit : mm

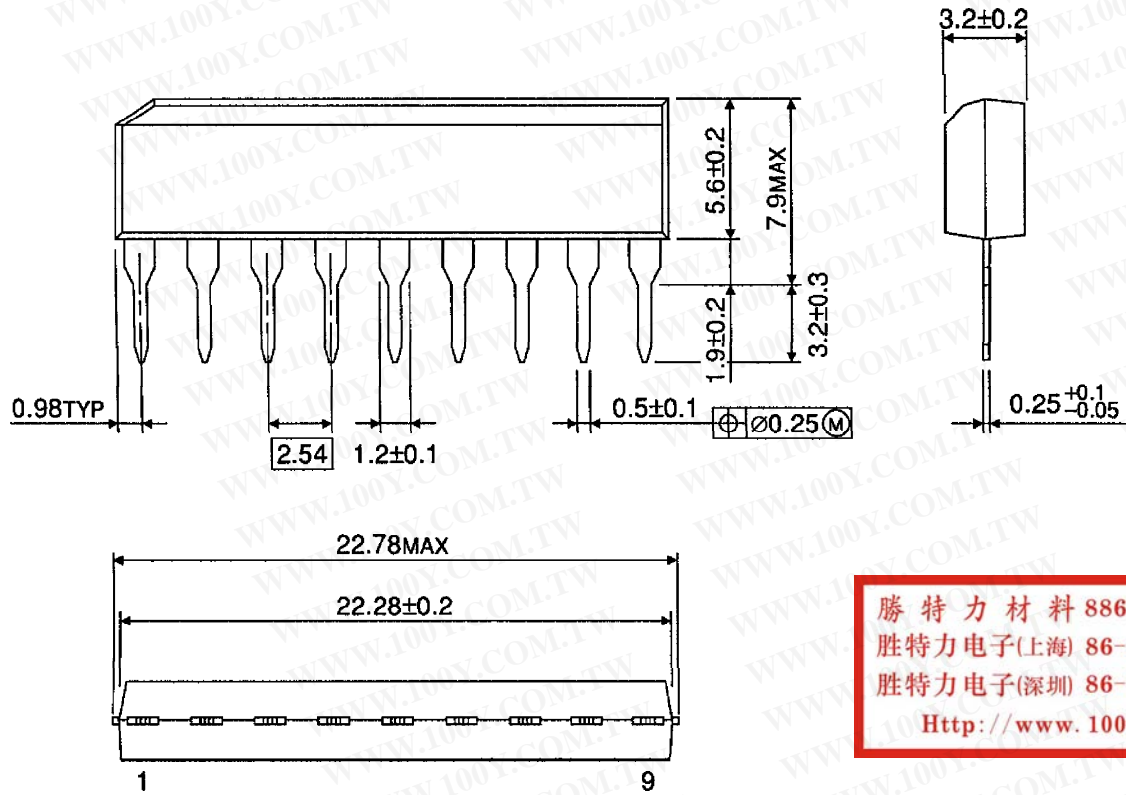


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Weight : 0.6g (Typ.)

OUTLINE DRAWING
SIP9-P-2.54A

Unit : mm

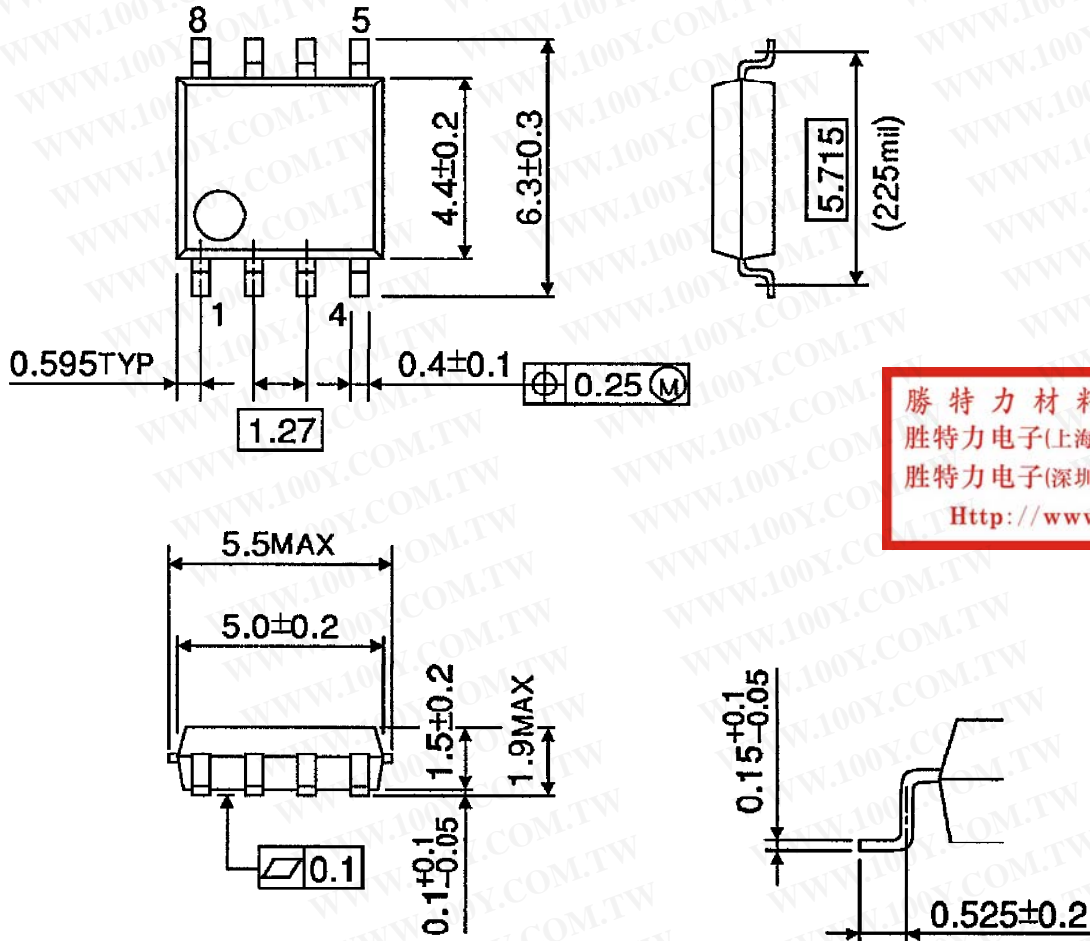


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Weight : 0.9g (Typ.)

OUTLINE DRAWING
SOP8-P-225-1.27

Unit : mm

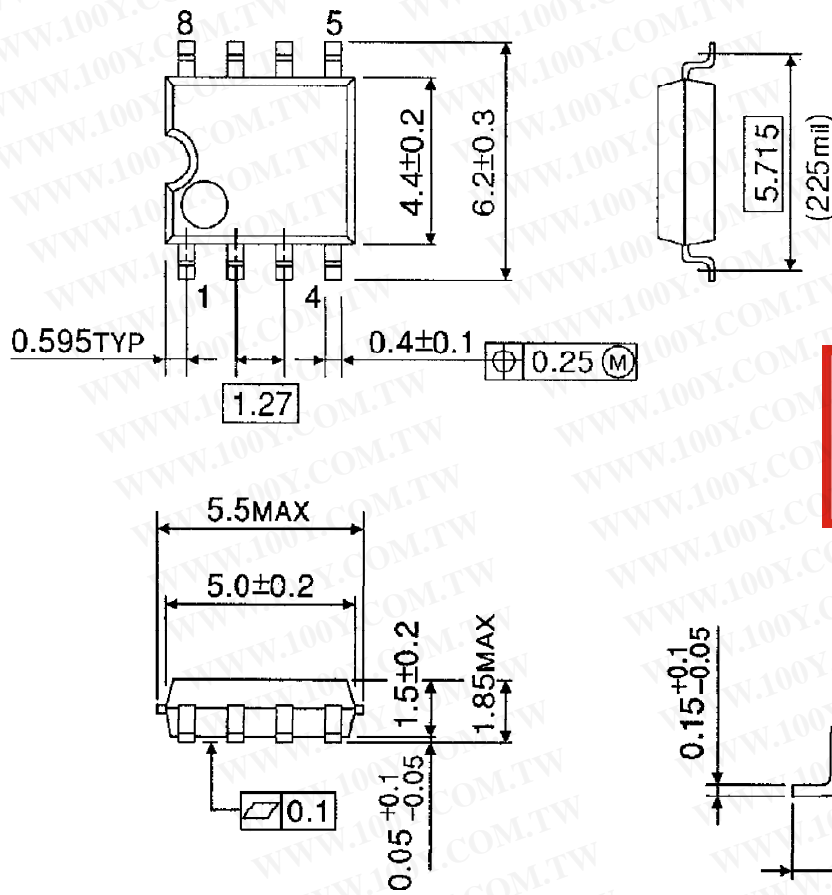


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Weight : 0.1g (Typ.)

OUTLINE DRAWING
SOP8-P-225-1.27B

Unit : mm



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Weight : 0.1g (Typ.)