TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA75393P, TA75393PA, TA75393S, TA75393F, TA75393FB

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. VCC 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 ±1~18V

Low supply current : 0.8mA (Typ.)

Low input offset voltage : ±2mV (Typ.)

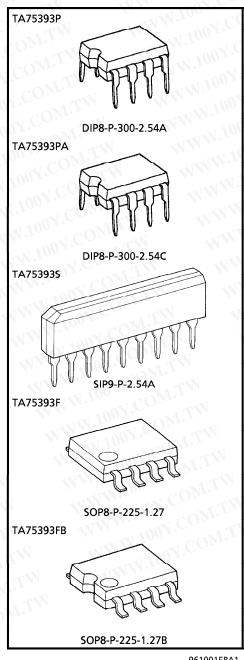
Wide common mode input voltage : 0~V_{CC} − 1.5V

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.)

勝 特 力 材 料 886-3-5753170 胜特力电子(上海) 86-21-54151736 胜特力电子(深圳) 86-755-83298787 Http://www.100y.com.tw



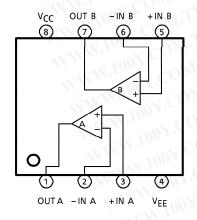
961001EBA

● TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

PIN CONNECTION (TOP VIEW)

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

TA75393F

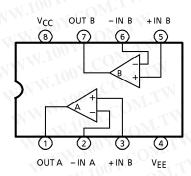


TA75393P, TA75393PA

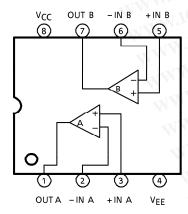
WW.100Y.COM.TW

WWW.100Y.

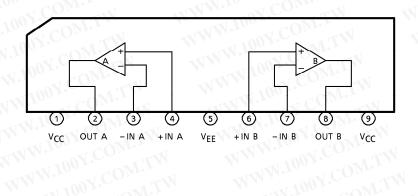
Y.COM.TW



TA75393FB



TA75393S



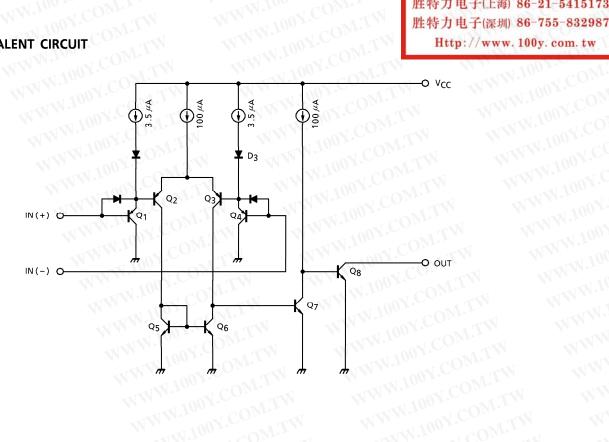
961001EBA1'

The information contained herein is subject to change without notice

The products described in this document are subject to foreign exchange and foreign trade control laws. The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA CORPORATION for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of TOSHIBA CORPORATION or others.

勝 特 力 材 料 886-3-5753170 胜特力电子(上海) 86-21-54151736 胜特力电子(深圳) 86-755-83298787 Http://www.100y.com.tw

WWW.100Y.COM.TW 100Y.COM.TW EQUIVALENT CIRCUIT



WWW.100Y.COM.TW

WWW.100Y.CO

ooy.COM.TW

WWW.100Y.COM.TW

勝 特 力 材 料 886-3-5753170 胜特力电子(上海) 86-21-54151736 胜特力电子(深圳) 86-755-83298787 Http://www. 100y. com. tw

WWW.100Y.COM.7

WWW.100

WWW.100Y.COM.TW 100Y.COM.TW **MAXIMUM RATINGS** ($Ta = 25^{\circ}C$)

MAM.100X.COW.IA								
MAXIMUM RATINGS (Ta = 25°C) CHARACTERISTIC	SYMBOL	TA75393P TA75393PA TA75393S	TA75393F TA75393FB	UNI				
Supply Voltage	Vcc	± 18 OR 36	± 18 OR 36	V				
Differential Input Voltage	DVIN	±36	±36	V				
Common Mode Input Voltage	CMVIN	-0.3~V _{CC}	-0.3~V _{CC}	V				
Power Dissipation	PD	500	240	mW				
Operating Temperature	Topr	-40~85	- 40~85	°C				
Storage Temperature	T _{stg}	- 55~125	- 55~125	°C				

WWW.100Y.COM.TW

WWW.1001.CO.

LOON.TW

WWW.100Y.COM.TW

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

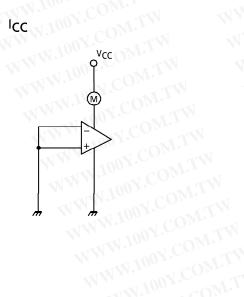
CHARACTERISTIC	SYMBOL	TEST CIR- CUIT	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	VIO	4	TW = 100		= N	2	5	mV
Input Bias Current	INT.	2	V— VITE	100	1.4	25	250	nA
Input Offset Current	10	20	Wi-	WW.	V.EO	5	50	nA
Common Mode Input Voltage	CMVIN	4	OM.TW -		OOYOC	\overline{M} .	V _{CC} - 1.5	V
Voltage Gain	GV	n (1) .($R_L = 15k\Omega$	MM	1007.0	200		V/mV
Supply Current	ICC VV	1	No load	WWW	- N	0.8	2	mA
Sink Current	ISINK	5	IN (+) = 0V, IN (- V _{OL} = 1.5V) = 1V	6	16	V.T.V	mA 🕥
Output Voltage ("L" Level)	V _{OL}	5.0	IN (+) = 0V, IN (- I _{SINK} = 3mA) = 1V	W 1-100	0.2	0.4	V
Output Leak Current	ILEAK	3	IN(+) = 1V, IN(- $V_O = 5V$) = 0V	MAIN	0.1	OM_{\perp}	√ nA
Response Time	t _{rsp}	6	$R_L = 5.1k\Omega$, $C_L = 1$	5pF		1.3		μs

勝 特 力 材 料 886-3-5753170 胜特力电子(上海) 86-21-54151736 胜特力电子(深圳) 86-755-83298787 Http://www.100y.com.tw

WWW.100Y.COM.

WWW.100Y.COM.TW **TEST CIRCUIT**

(1) ICC



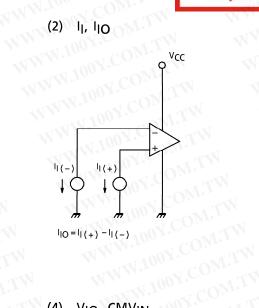
WWW.100Y.COM.TW .com.TW

ooy.COM.TW

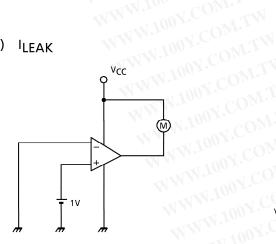
WWW.100Y.COM.TW

NWW.100Y.COM.TW

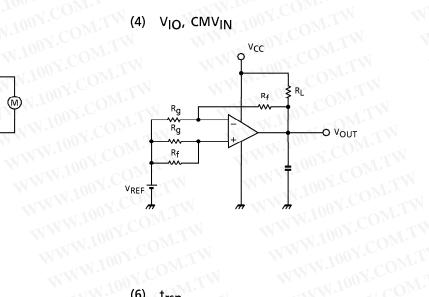
WWW.100Y.CO



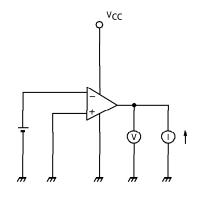
(3) ILEAK

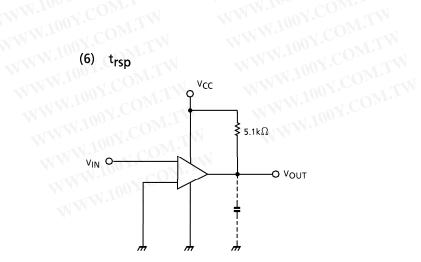


VIO, CMVIN (4)

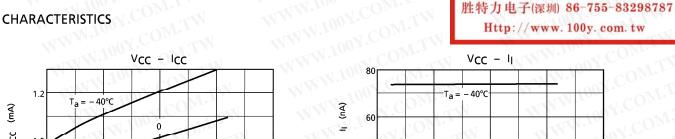


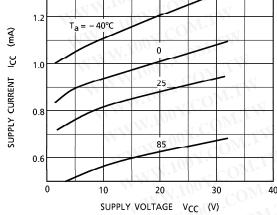
(5) I_{SINK}, V_{OL}

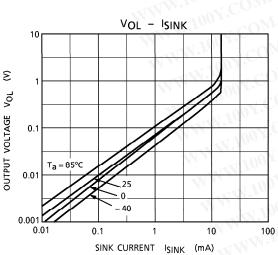


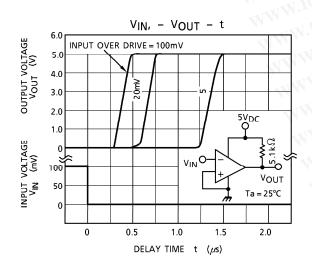


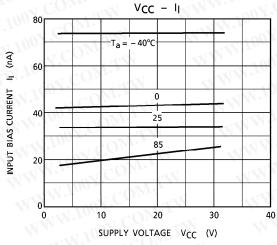
勝 特 力 材 料 886-3-5753170 胜特力电子(上海) 86-21-54151736

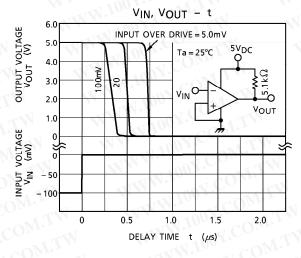


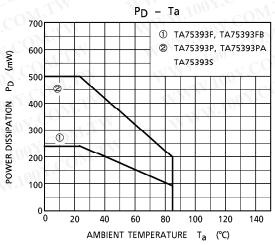












WWW.100Y.COM.TW WWW.100Y.COM.TW WWW.100Y.COM.TW 100Y.COM.TW OOY.COM.TW Unit : mm **OUTLINE DRAWING** 100Y.COM.TW WWW.100Y.COM.TW WWW.100Y.COM.TW DIP8-P-300-2.54A WWW.100 220 WWW.100Y.COM.TW WWW.100Y 5 WWW.100Y.COM.TW Ø 7.62 45 65. 5.05. ဖ 0.25 4 WWW.100Y.COM.TW WWW.100Y.COM.T 10.1 MAX 100Y.COM.TV 9.6±0.2 0.85±0.1 特力材料886-3-5753170 က 胜特力电子(上海) 86-21-54151736 9540 540 胜特力电子(深圳) 86-755-83298787 Http://www. 100y. com. tw က က WWW.100Y.CC സ 30MIN WWW.100Y.COM.TW 0.5±0.1 0.25 M 0.99TYP WWW.100Y.COM 1.2±0.1 2.54 WWW.100Y.COM.TW

EWW.100Y.COM.TW

WWW.100Y.CO

DOY.COM.TW

Weight: 0.5g (Typ.)

WWW.100Y.COM.TW

WWW.100Y.COM.TW 100Y.COM.TW OOY.COM.TW Unit : mm **OUTLINE DRAWING** W.100Y.COM.TW WWW.100Y.COM.TW WWW.100Y.COM.TW DIP8-P-300-2.54C WWW.100 വ് WWW.100Y.COM.TW WWW.1007 8 WWW.100Y.COM.TW 6.4 ± 0.2 7.62 6.05 0.05 25 WWW.100Y.COM.TW 4 100Y.COM.TW WWW.100Y.CO1 10.1 MAX 勝 特 力 材 料 886-3-5753170 9.6±0.2 胜特力电子(上海) 86-21-54151736 1.0±0.1 胜特力电子(深圳) 86-755-83298787 Http://www.100y.com.tw WWW.100Y.COM ωj.* 940. WWW.100Y.COM.TW 340. က က Z 5 Lက <u>-</u> 0.5±0.1 0.25 M 0.99TYP WWW.100Y.COM 2.54 1.5±0.1 WWW.100Y.COM.TW

EWW.100Y.COM.TW

WWW.100Y.CO

DOY.COM.TW

WWW.100Y.COM.TW

Weight: 0.6g (Typ.)

WWW.100Y.COM.T

WWW.100X.

WWW.100Y.COM.TW 100Y.COM.TW **OUTLINE DRAWING**

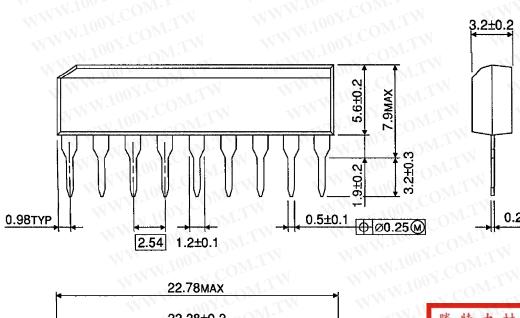
WWW.100Y.COM.TW 100Y.COM.TW Unit : mm SIP9-P-2.54A WWW.100Y.COM.TW MMM.700

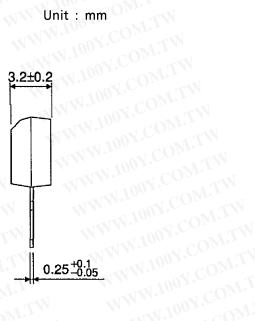
WWW.100Y.COM.TW

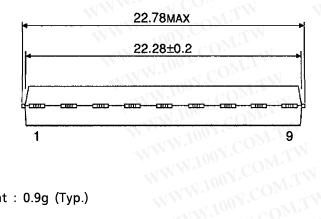
NWW.100Y.COM.TW

WWW.100Y.CO.

ony.COM.TW





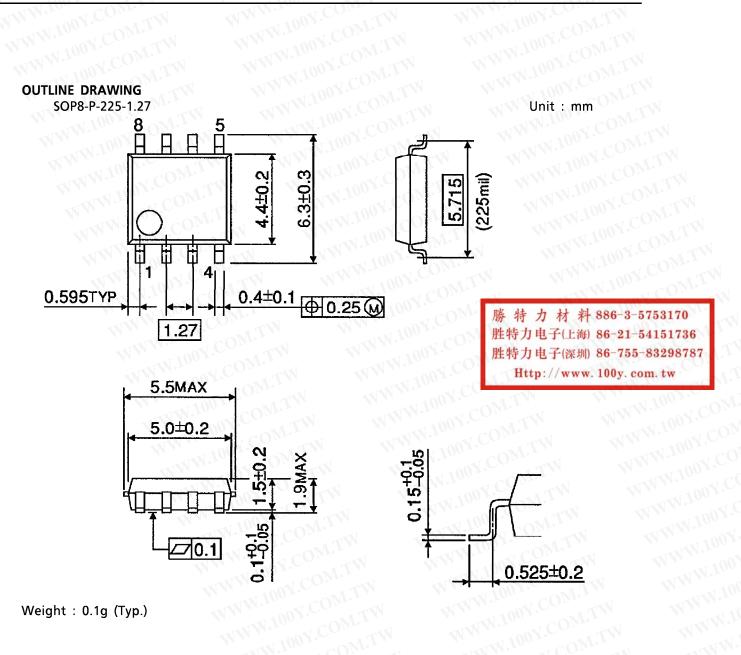


勝 特 力 材 料 886-3-5753170 胜特力电子(上海) 86-21-54151736 胜特力电子(深圳) 86-755-83298787 Http://www.100y.com.tw WWW.100Y.

WWW.100Y.COM.

WW.100Y.COM.

Weight: 0.9g (Typ.)



WW.100Y.COM.TW

WWW.100Y.CO

DY.COM.TW

Weight: 0.1g (Typ.)

WWW.100Y.COM.TW OOY.COM.TW Unit : mm **OUTLINE DRAWING** WWW.100Y.COM.TW SOP8-P-225-1.27B 5 目 4.4 ± 0.2 ന 5.715 (225mil) 2±0. ø. 0.595TYP 0.4 ± 0.1 0.25 M 特力材料886-3-5753170 1.27 胜特力电子(上海) 86-21-54151736 胜特力电子(深圳) 86-755-83298787 Http://www. 100y. com. tw **5.5MAX** 5.0±0.2 1.85MAX $0.15_{-0.05}^{+0.1}$ -65 **□7**0.1 0.05 WWW.100Y.COM.TW 0.4±0.2

WW.100Y.COM.TW

WWW.100Y.COM.TW

WWW.100Y.COM.TW

Weight: 0.1g (Typ.)

WWW.100Y.COM.TW