

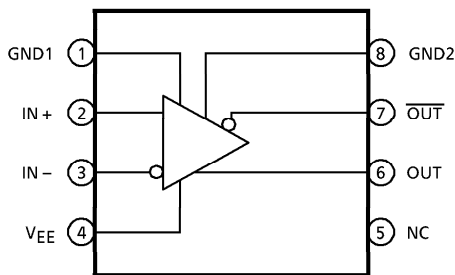
TA8504F

HIGH SPEED COMPARATOR

FEATURES

- Pulse delay : 1.6ns (Typ.)
- Differential ECL output
- 50Ω Line drive output
- 8pin mini flat package
- -5V single power supply

BLOCK DIAGRAM



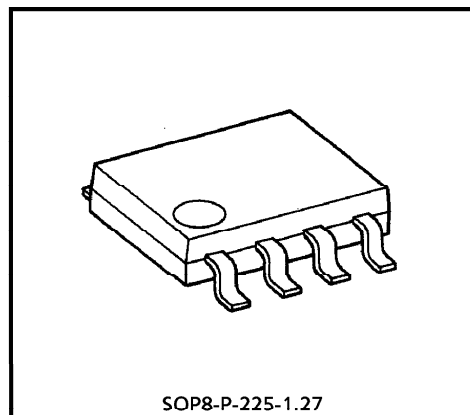
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{EE}	0.3 ~ -6.0	V
Differential Input Voltage	DV_{IN}	± 3	V
Common Mode Input Voltage	CMV_{IN}	-0.3 ~ V_{EE}	V
Power Dissipation	P_D	(*) 300	mW
Operating Temperature	T_{opr}	-20 ~ 85	°C
Storage Temperature	T_{stg}	-55 ~ 150	°C

Recommended Operating Voltage : $V_{EE} = -5.5 \sim -4.5V$, $T_a = -20 \sim 70^\circ C$

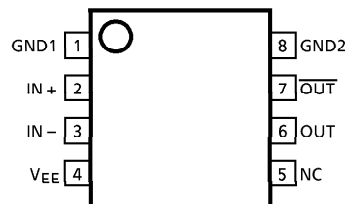
(Note *) Shown here is data for the single unit of IC only and when mounted on a substrate, power dissipation can be made larger than this. However, as it varies largely depending upon the state of mounted on a substrate, it shall be examined thoroughly.

(Note **) As this product is weak to surge voltage, please handle carefully.



Weight : 0.1g (Typ.)

PIN CONNECTION (TOP VIEW)



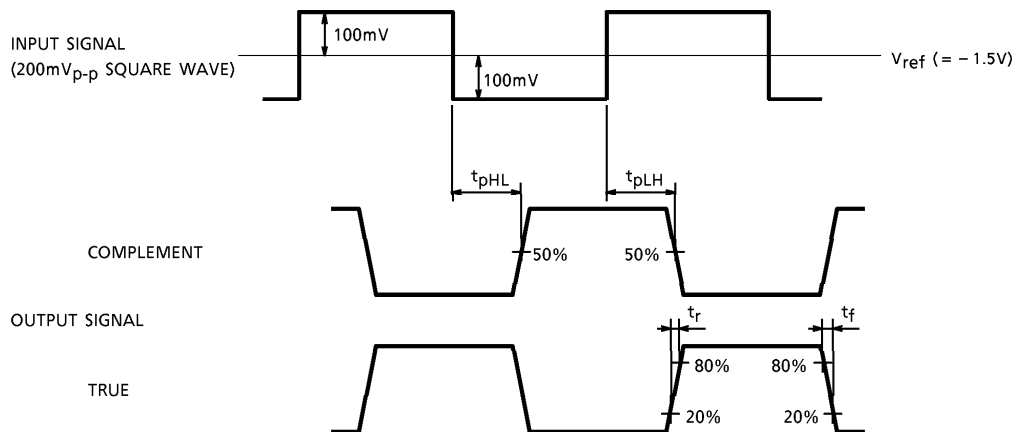
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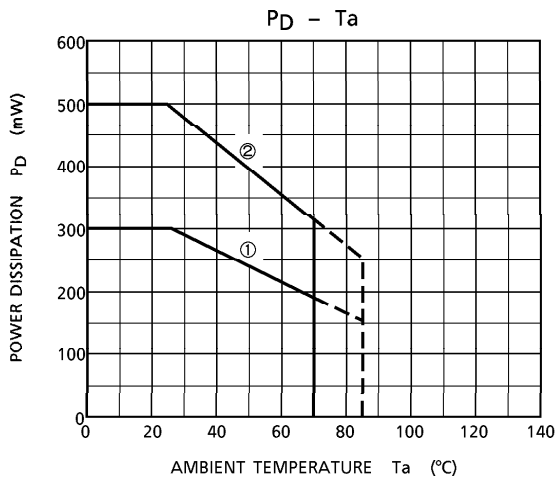
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ELECTRICAL CHARACTERISTICS ($V_{EE} = -5V$, $R_L = 50\Omega$, $T_a = 25^\circ C$)

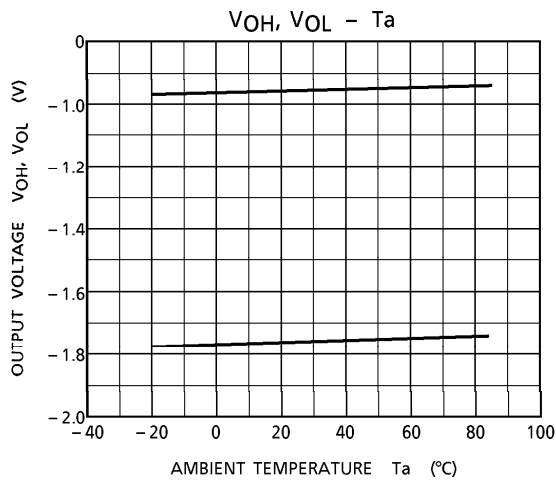
CHARACTERISTIC		SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage		—	—	$R_S < 500\Omega$	-10	—	10	mV
Input Bias Current		—	—	—	—	20	40	μA
Input Offset Current		—	—	—	—	—	10	μA
Supply Current		I_{EE}	—	$V_{EE} = -5.5V$	—	26	37	mA
Propagation Delay		t_{pLH}	—	(Note 1)	—	1.6	2.6	ns
		t_{pHL}	—	(Note 1)	—	1.6	2.6	
Rise Time	20~80%	t_r	—	(Note 1)	—	1.0	1.8	ns
Fall Time	20~80%	t_f	—	(Note 1)	—	0.7	1.6	
Common Mode Input Voltage Range		—	—	—	-2.5	—	-0.8	V
Output Voltage		V_{OH}	—	$R_L = 50\Omega$ is load per -2V.	-1.025	—	-0.88	V
		V_{OL}	—		-1.81	—	-1.62	
Input Capacitance		—	—	—	—	3.5	—	pF
Open Loop Gain		—	—	—	—	70	—	dB

(Note 1) Input/Output conditions are as illustrated below.



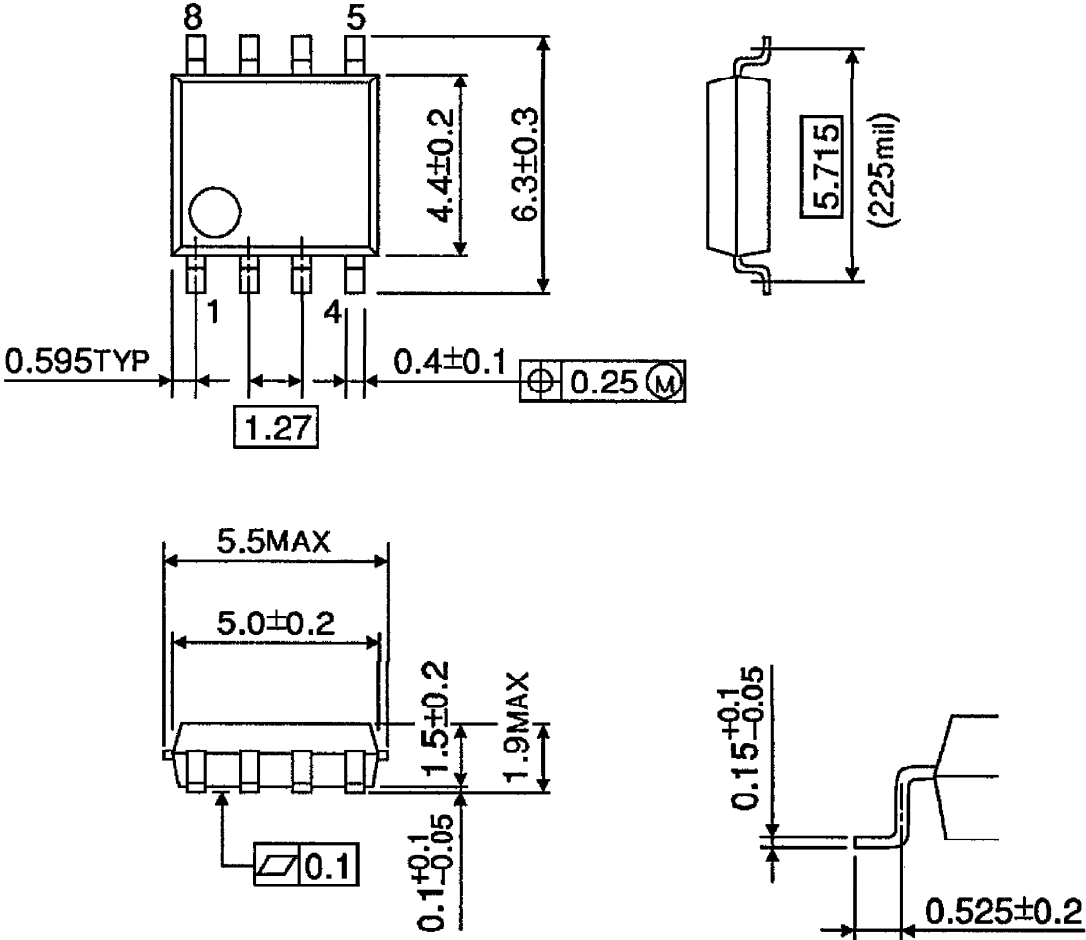


(Note 1) ① is data of a single unit of IC only.
(Note 2) ② is reference data when mounted on a glass epoxy resin substrate in $20 \times 20 \times 1.8\text{mm}^3$, and the copper laminated area is 60% of the substrate.



OUTLINE DRAWING
SOP8-P-225-1.27

Unit : mm



Weight : 0.1g (Typ.)