

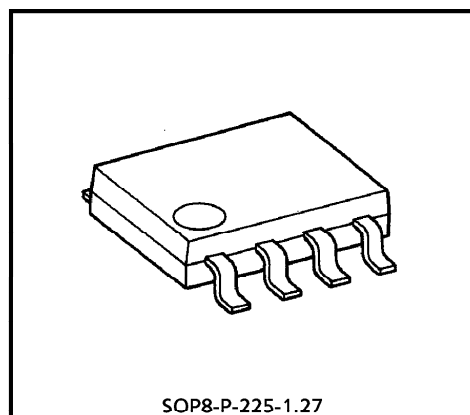
TA7522F

DUAL VOLTAGE COMPARATOR

The TA7522F is an easy-to-use small 8-pin mini-flat package IC incorporating two voltage comparator circuits. Because of its very small size, it is useful for hybrid IC and other devices which must be very small or thin. In addition, the IC has so wide an operating temperature range that it can be used in wide application fields.

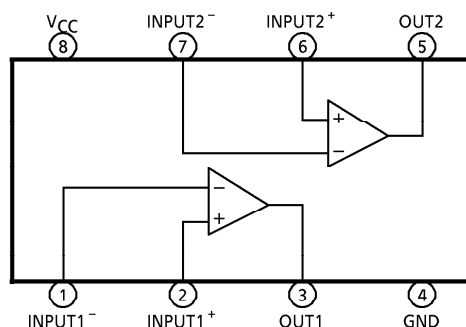
FEATURES

- Two-circuit package
- High gain
- Single 3V power supply for operation
- A 0V input causes action in the IC with a single power supply.
- Wide common-mode input range
- No latch-up
- Operating temperature range : from -40 to 85°C
- Open-collector output
- Small SOP-8 pin



Weight : 0.08g (Typ.)

BLOCK DIAGRAM AND PIN LAYOUT



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PIN DESCRIPTION

PIN No.	SYMBOL	DESCRIPTION
1	INPUT1 ⁻	Inverted-input pin
2	INPUT1 ⁺	Non-inverted-input pin
3	OUT1	Output pin corresponding to INPUT1
4	GND	Grounded
5	OUT2	Output pin corresponding to INPUT2
6	INPUT2 ⁺	Non-inverted-input pin
7	INPUT2 ⁻	Inverted-input pin
8	V _{CC}	Power supply pin

MAXIMUM RATINGS (Ta = 25°C)

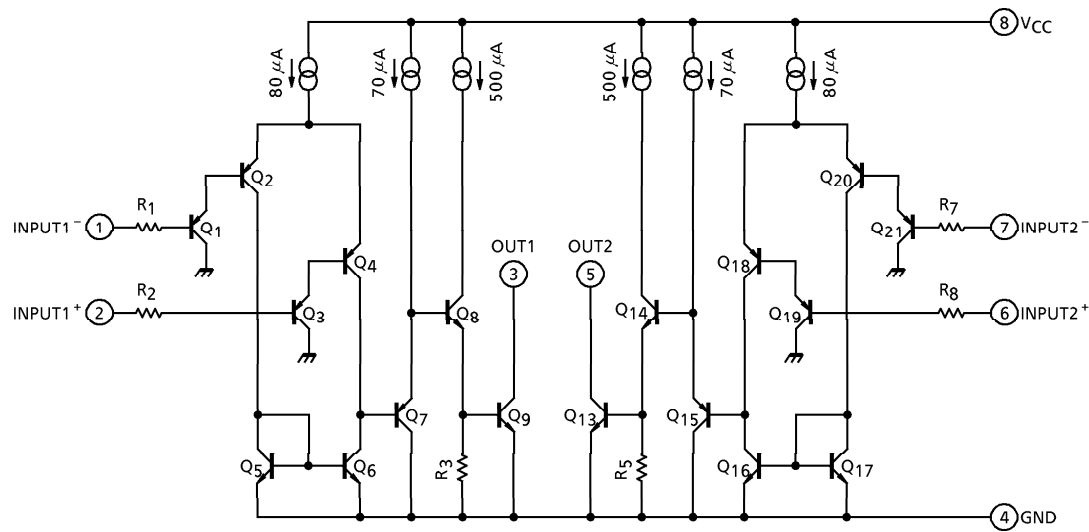
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{CC}	- 0.3 to + 18	V
Supply Voltage Surge	V _{CC SURGE}	30 (within 1 second)	V
Power Dissipation	P _D	440	mW
Differential Input Voltage	DV _{IN}	± 18	V
Input Voltage	V _{IN}	- 0.3 to 18	V
Output Current	I _{SINK}	30	mA
Operating Temperature	T _{opr}	- 40 to 85	°C
Storage Temperature	T _{stg}	- 55 to 150	°C

ELECTRICAL CHARACTERISTICS (Ta = - 40 to +85°C)

CHARACTERISTIC	SYMBOL	TEST CIR- CUIT	TEST CONDITION	MIN.	(Note) TYP.	MAX.	UNIT
Voltage Gain	G_V	—	$V_{CC} = 6V$, $R_L = 1k\Omega$ $f = 10Hz$	60	95	—	dB
Input Offset Voltage	V_{IO}	—	$V_{CC} = 6V$, $R_L = 1k\Omega$ $CMV_{IN} = 3$	—	2	10	mV
Input Bias Current	I_I	—	$V_{CC} = 6V$, $CMV_{IN} = 3V$	—	- 0.2	- 2	μA
Input Offset Current	I_{IO}	—	Same as above	—	0.02	0.3	μA
Common-mode Input Voltage	CMV_{IL}	—	$V_{CC} = 6.5V$, $R_L = 1k\Omega$ $V_{IO} = 20mV$	—	- 0.5	0	V
	CMV_{IH}	—	Same as above	5.0	5.3	—	V
Output Voltage	V_{OL}	OUT1 OUT2	$V_{CC} = 5.5V$, $V_{IN} = 0.1V$ $I_{OL} = 10mA$	—	0.18	0.4	V
Output Leakage Current	I_{LEAK}	OUT1 OUT2	$V_{CC} = 6V$, $V_{OUT} = 30V$	—	—	10	μA
		OUT1	$V_{CC} = 6V$, $V_{OUT} = 0.4V$	—	- 1.5	- 10	μA
Current Consumption	I_{CC}	—	$V_{CC} = 6.5V$, $R_L = \infty$	—	3	7	mA

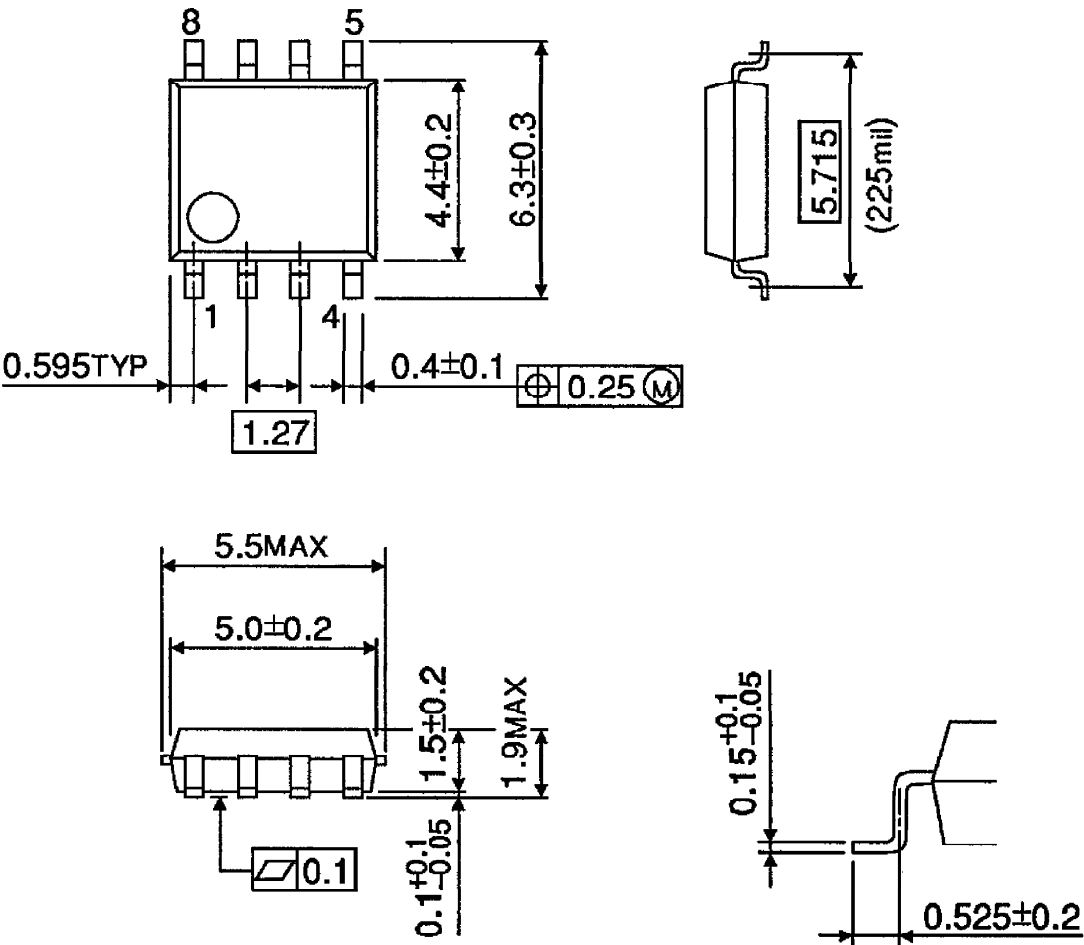
Note : An ambient temperature of 25°C is assumed for the typical values.

EQUIVALENT CIRCUIT



OUTLINE DRAWING
SOP8-P-225-1.27

Unit : mm



Weight : 0.08g (Typ.)