

TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

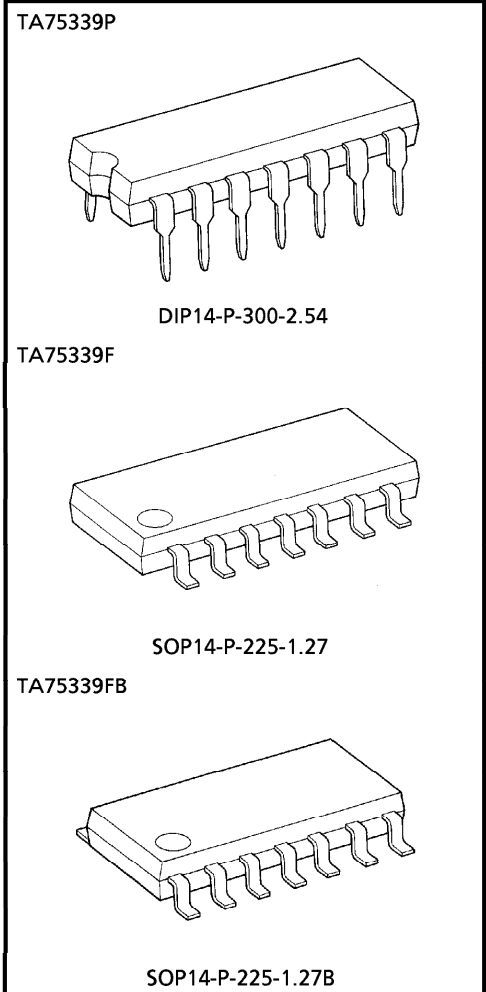
TA75339P, TA75339F, TA75339FB

QUAD COMPARATOR

This device consists of four independent voltage comparators that are 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 1.5 volts than the input common mode voltage. The output can be connected to other open collector outputs to achieve Wired-OR relationship.

FEATURES

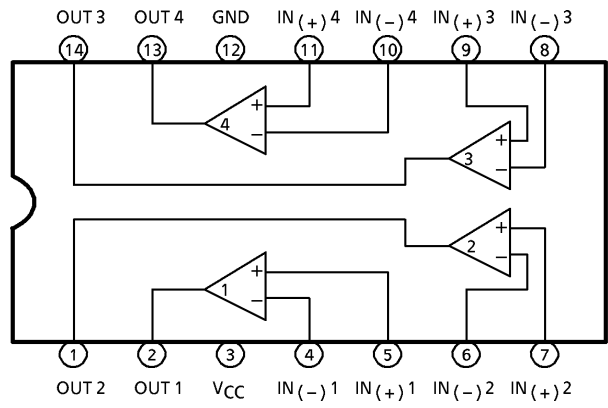
- Single Supply Voltage Range or Dual Supplies : 2V~36V or $\pm 1V\sim 18V$
- Low Supply Current : 0.8mA (Typ.)
- Low Input Offset Voltage : $\pm 2mA$ (Typ.)
- Wide Input Common Mode Voltage Range : $0V\sim V_{CC} - 1.5V$
- Output Compatible with TTL, DTL, MOS and CMOS Logic System.
- The Output Can be Connected to Achieve Wired-OR Relation.



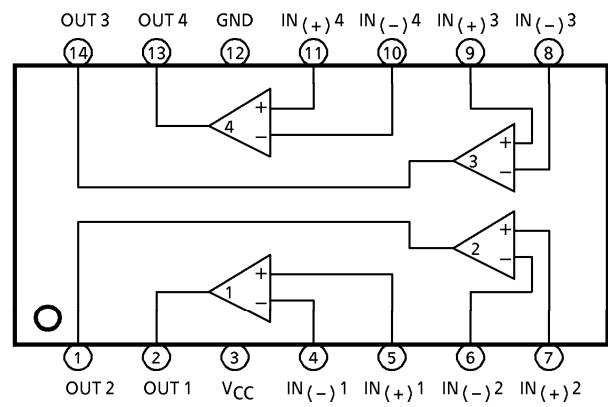
Weight
DIP14-P-300-2.54 : 1.0g (Typ.)
SOP14-P-225-1.27 : 0.2g (Typ.)
SOP14-P-225-1.27B : 0.2g (Typ.)

PIN CONNECTION (TOP VIEW)

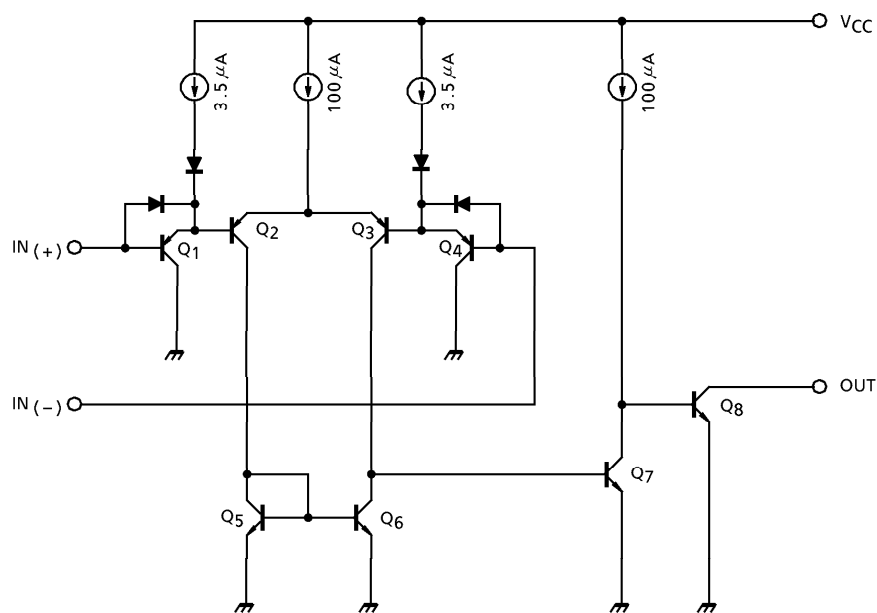
TA75339P



TA75339F / TA75339FB



EQUIVALENT CIRCUIT



MAXIMUM RATINGS (Ta = 25°C)

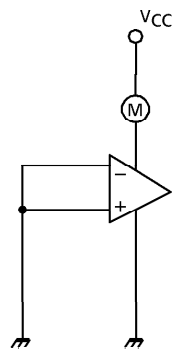
CHARACTERISTIC	SYMBOL	TA75339P	TA75339F	TA75339FB	UNIT
Supply Voltage	V _{CC}	± 18 OR 36	± 18 OR 36	± 18 OR 36	V
Differential Input Voltage	DV _{IN}	± 36	± 36	± 36	V
Common Mode Input Voltage	CMV _{IN}	- 0.3~V _{CC}	- 0.3~V _{CC}	- 0.3~V _{CC}	V
Power Dissipation	P _D	625	280	280	mW
Operating Temperature	T _{opr}	- 40~85	- 40~85	- 40~85	°C
Storage Temperature	T _{stg}	- 55~125	- 55~125	- 55~125	°C

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

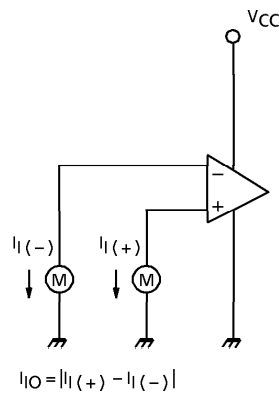
CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V _{IO}	4	—	—	2	5	mV
Input Offset Current	I _I	2	—	—	25	250	nA
Input Bias Current	I _{IO}	2	—	—	5	50	nA
Common Mode Input Voltage	CMV _{IN}	4	—	0	—	V _{CC} - 1.5	V
Voltage Gain	G _V	—	R _L = 15kΩ	—	200	—	V / mV
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

TEST CIRCUIT

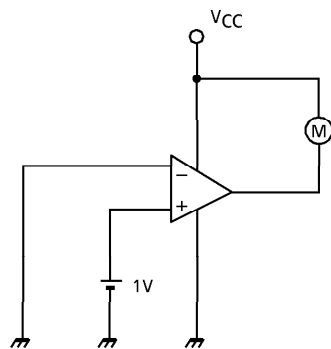
(1) I_{CC}



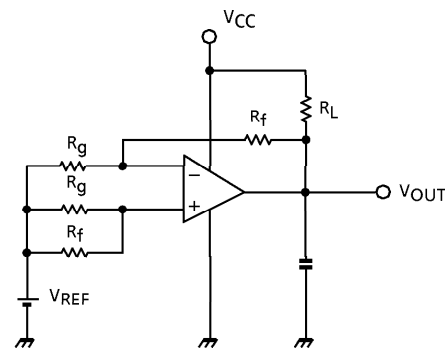
(2) I_I, I_{IO}



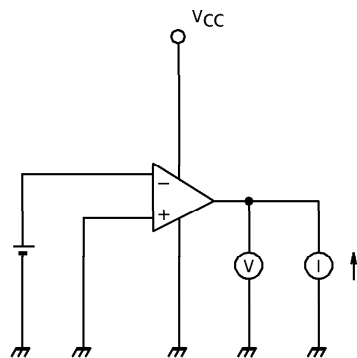
(3) I_{LEAK}



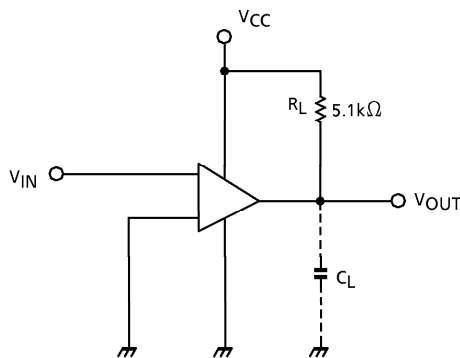
(4) V_{IO}, CMV_{IN}



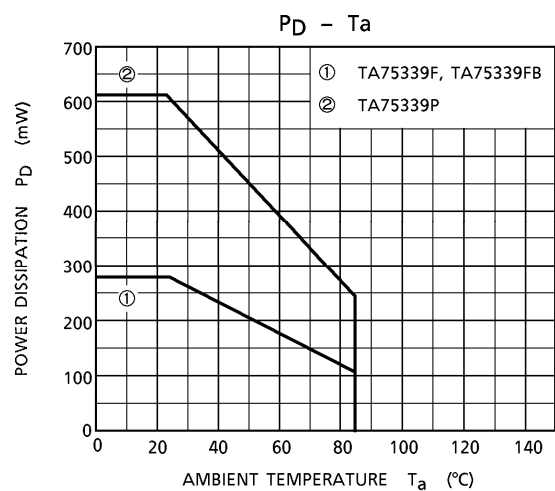
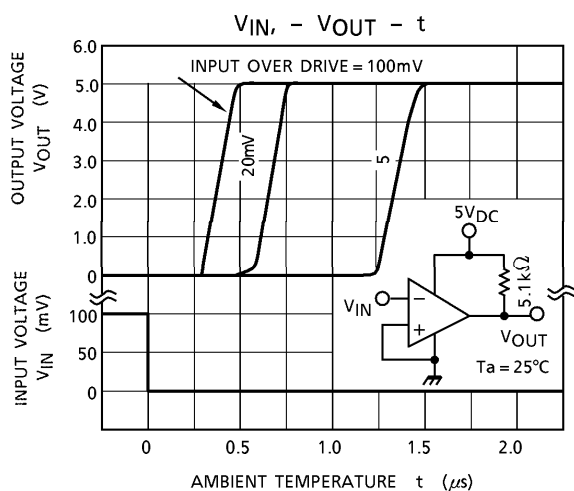
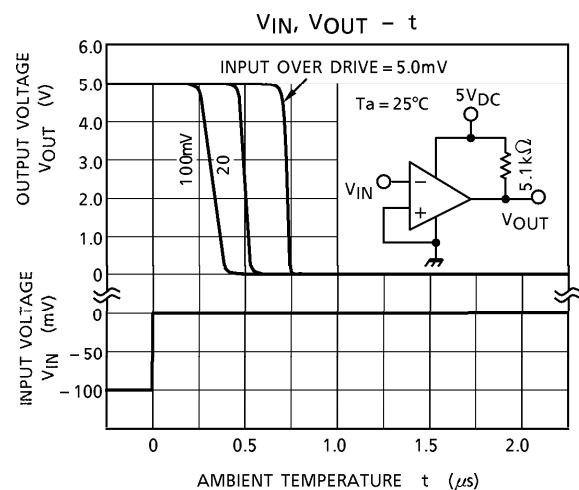
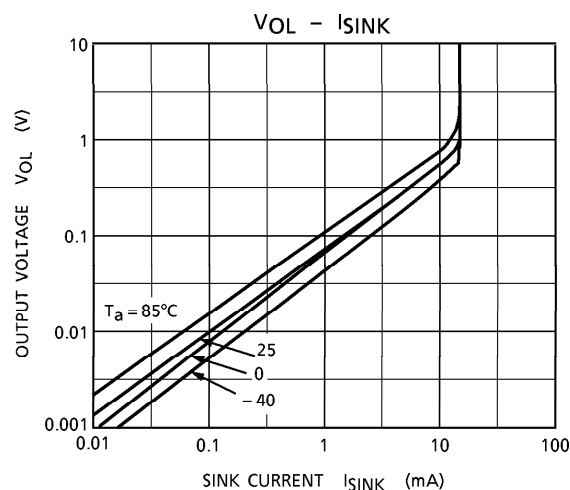
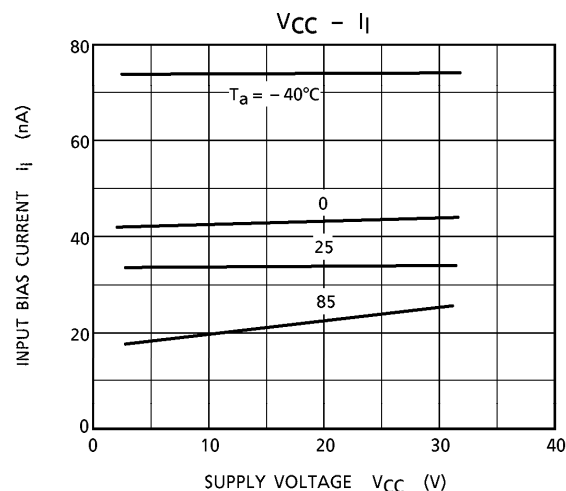
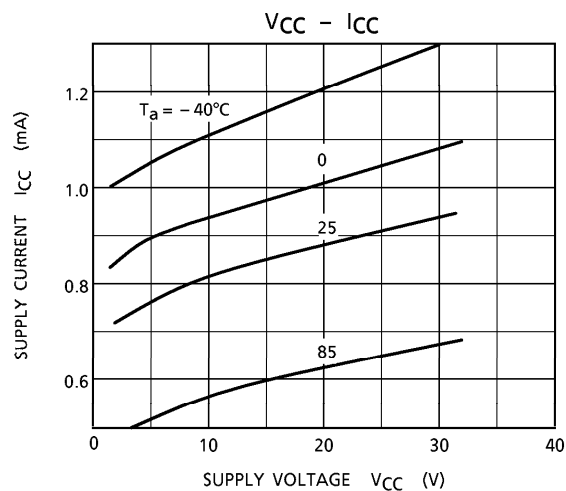
(5) I_{SINK}, V_{OL}



(6) t_{rsp}

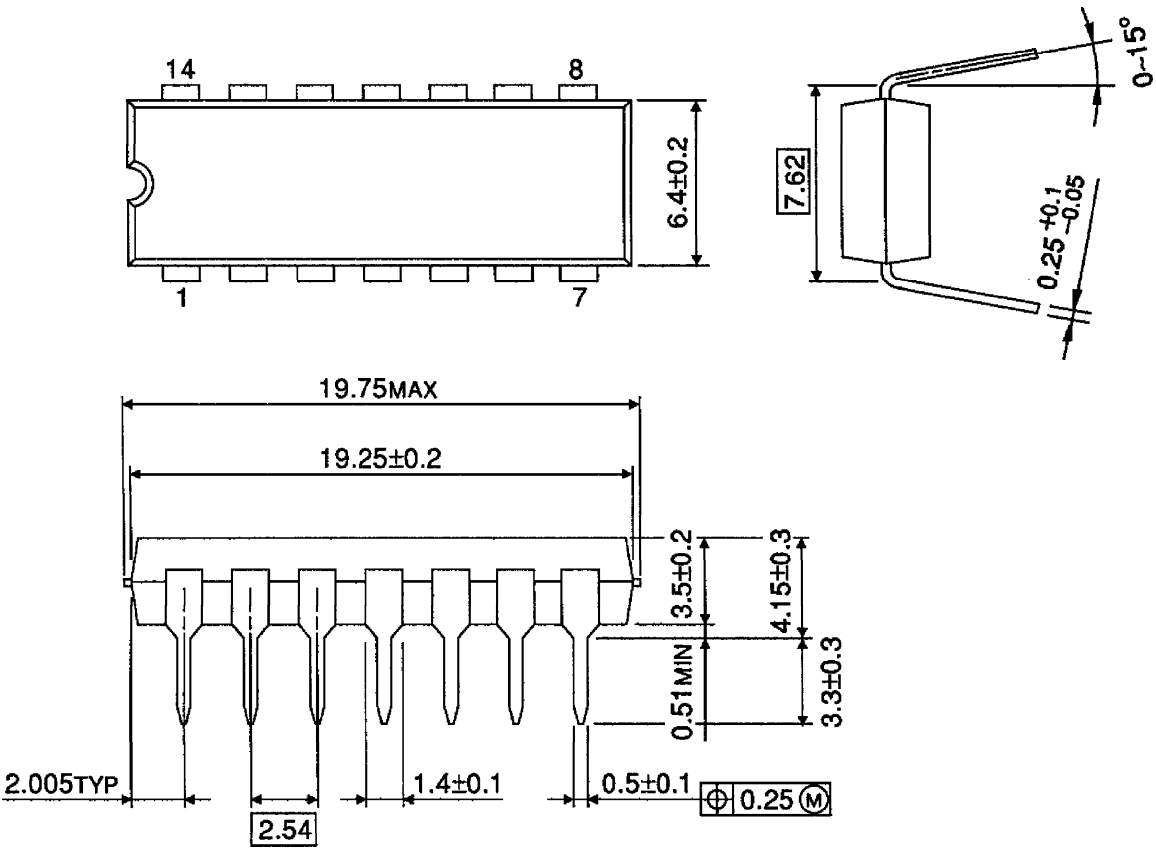


CHARACTERISTICS



PACKAGE DIMENSIONS
DIP14-P-300-2.54

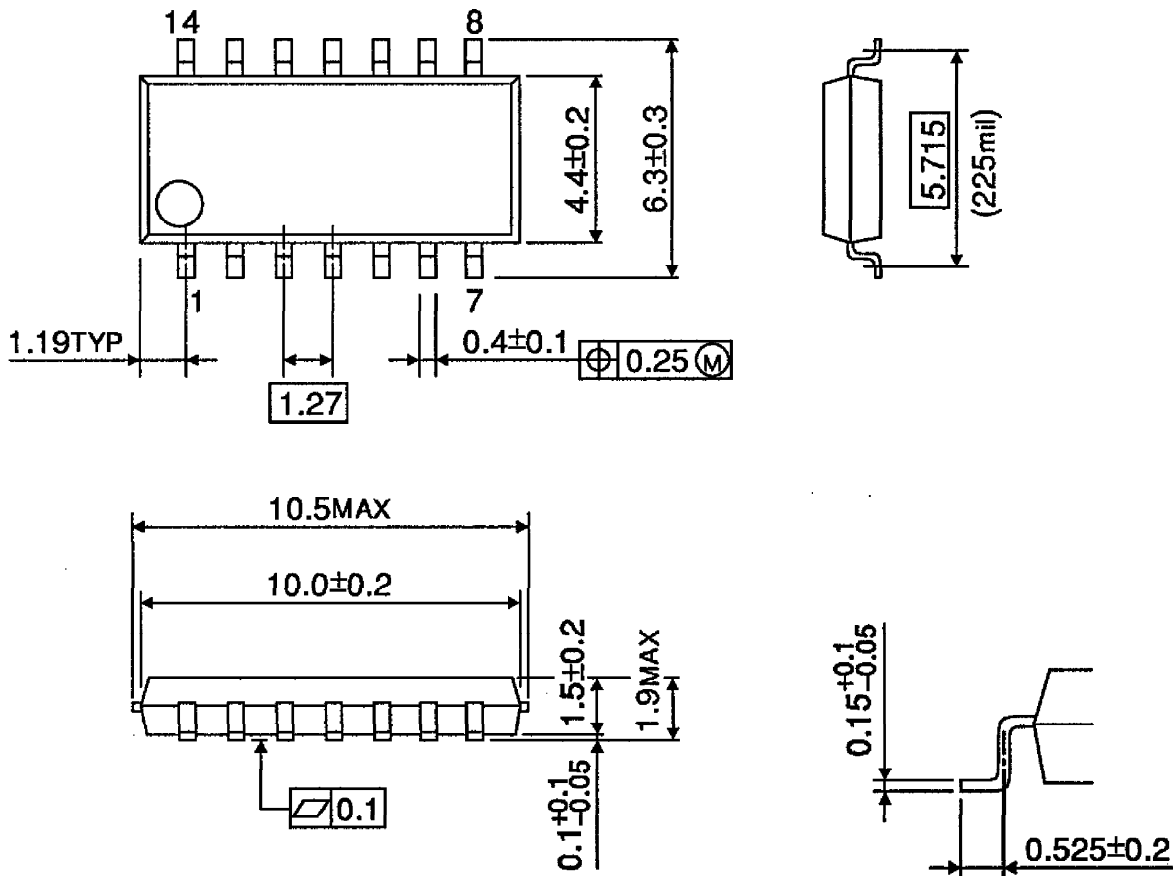
Unit : mm



Weight : 1.0g (Typ.)

PACKAGE DIMENSIONS
SOP14-P-225-1.27

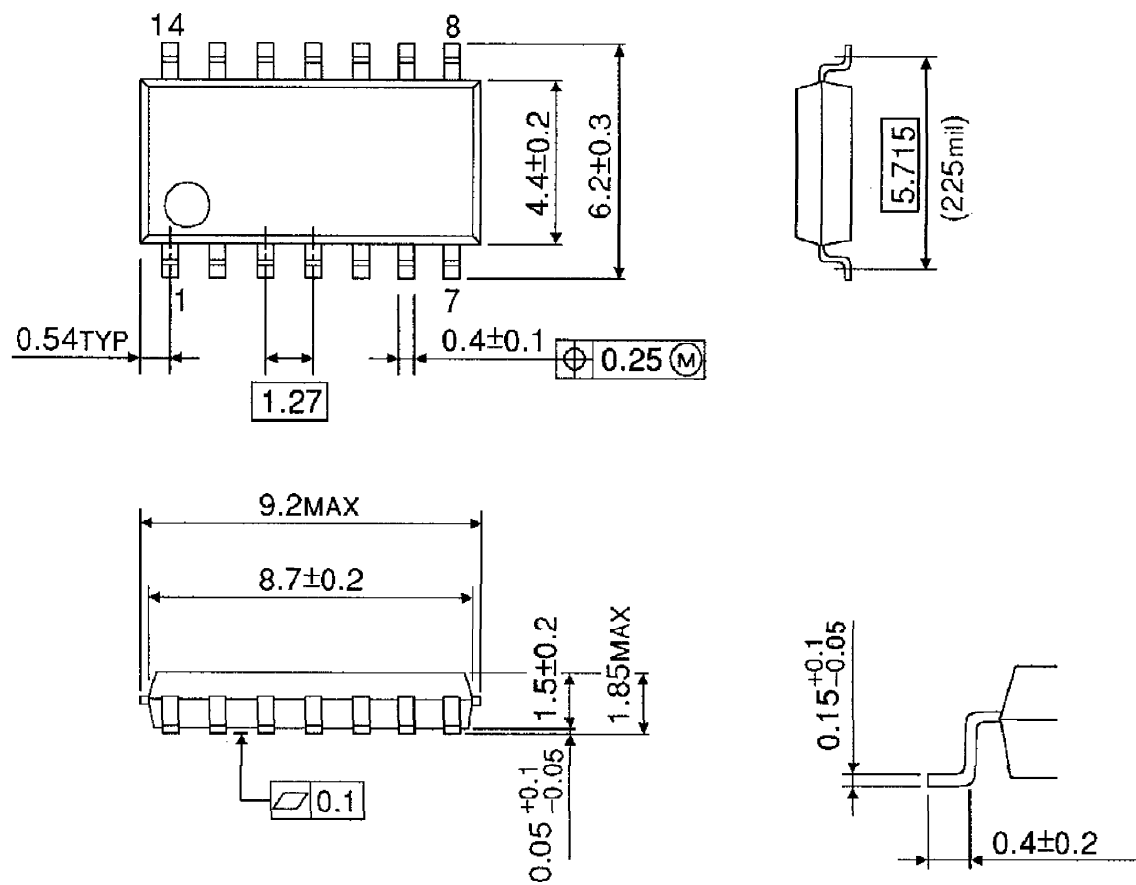
Unit : mm



Weight : 0.2g (Typ.)

PACKAGE DIMENSIONS
SOP14-P-225-1.27B

Unit : mm



Weight : 0.2g (Typ.)

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000707EBA

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