

TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

**TA75062P, TA75062S, TA75062F****DUAL OPERATIONAL AMPLIFIER**

The TA75062P, TA75062S and TA75062F are J-FET input low-power operational amplifiers with low input bias and offset current and fast slew rate.

The TA75062P is pin compatible with the TA75458P and 1458. The TA75062S is single-in-line package.

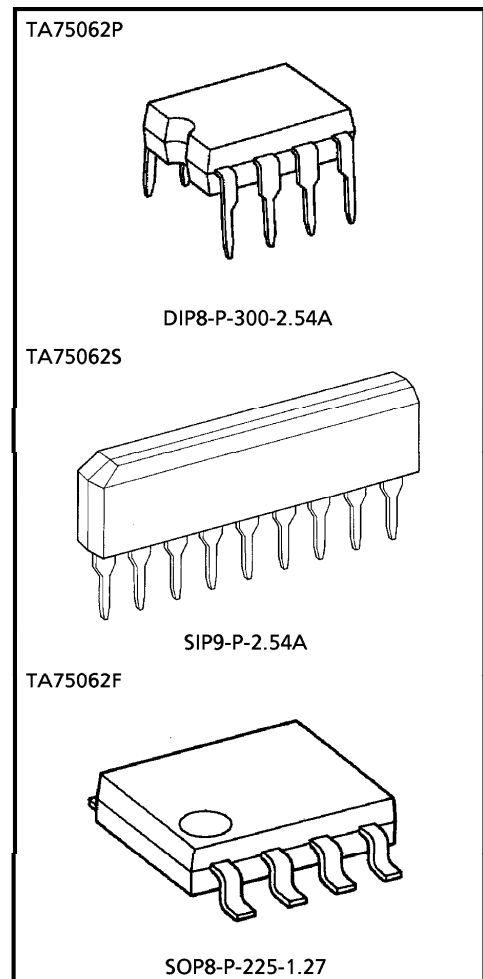
It is possible to exchange the position of 9 pin for 1 pin because of pin connection being symmetric.

The TA75062F is mini-flat package.

The TA75062P series are excellent choice for active filters, integrators, buffers and sample-and-hold circuits.

**FEATURES**

- Low Supply Current : 500 $\mu$ A MAX.
- Low Input Bias Current : 400pA MAX.
- Low Input Offset Current : 200pA MAX.
- High Slew Rate : 3.5V /  $\mu$ s
- Wide Supply Voltage Range :  $\pm 2 \sim \pm 18$ V
- Internal Frequency Compensation
- Output Short Circuit Protection

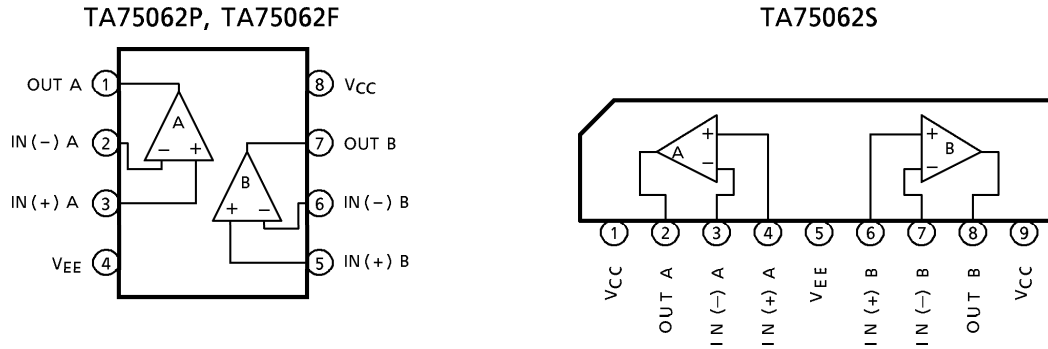


Weight	
DIP8-P-300-2.54	: 0.5g (Typ.)
SIP9-P-2.54A	: 0.9g (Typ.)
SOP8-P-225-1.27	: 0.1g (Typ.)

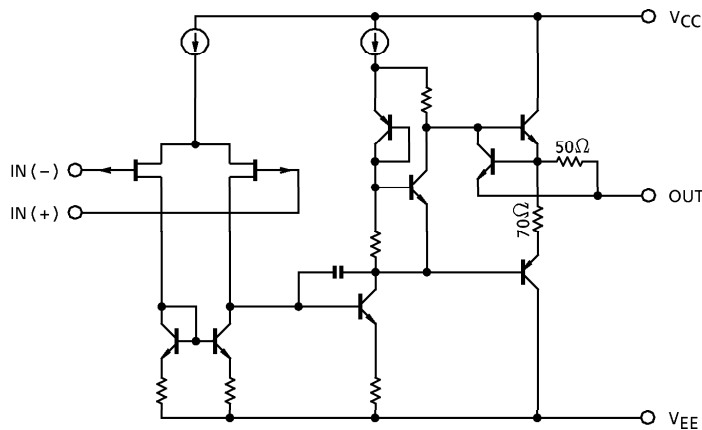
961001EBA1

- 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.
- 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.
- The information contained herein is subject to change without notice.

**PIN CONNECTION (TOP VIEW)**



**EQUIVALENT CIRCUIT**



**MAXIMUM RATINGS (Ta = 25°C)**

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V <sub>CC</sub>	18	V
	V <sub>EE</sub>	- 18	
Differential Input Voltage	DV <sub>IN</sub>	± 30	V
Input Voltage	V <sub>IN</sub>	± 15	V
Power Dissipation	TA75062P	500	mW
	TA75062S		
	TA75062F	240	
Operating Temperature	T <sub>opr</sub>	- 40~85	°C
Storage Temperature	T <sub>stg</sub>	- 55~125	°C

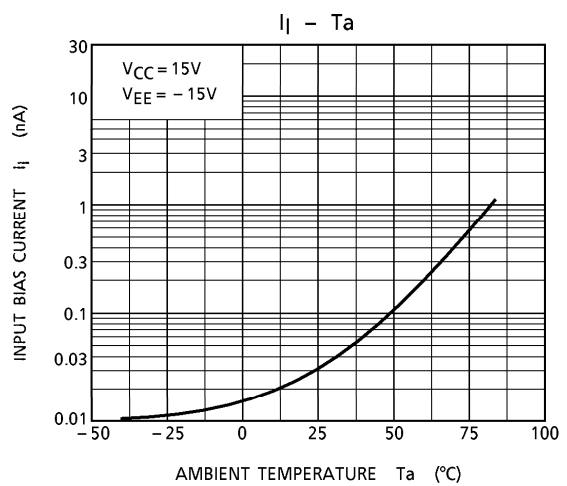
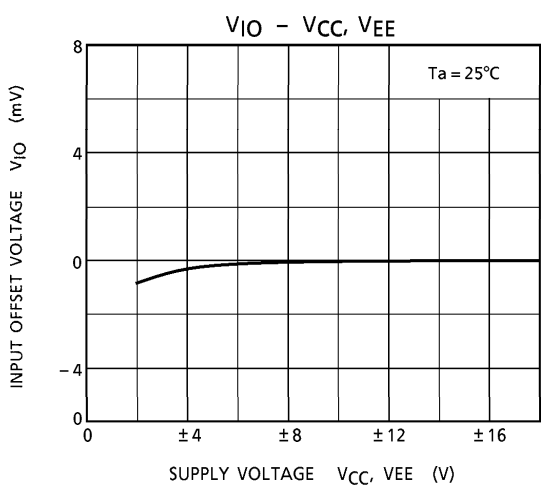
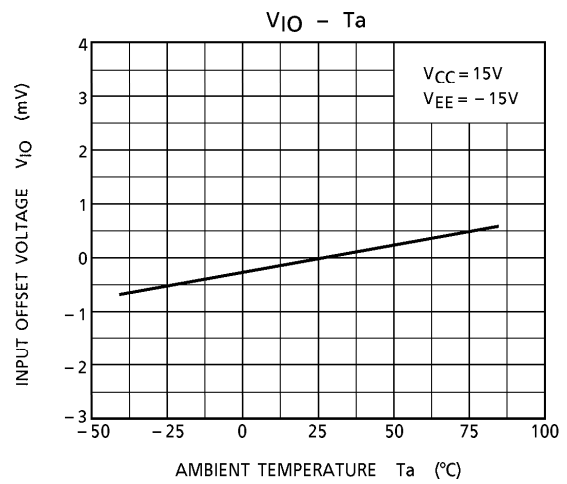
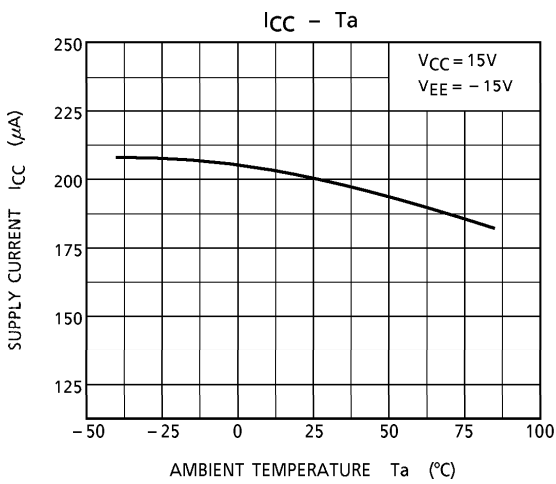
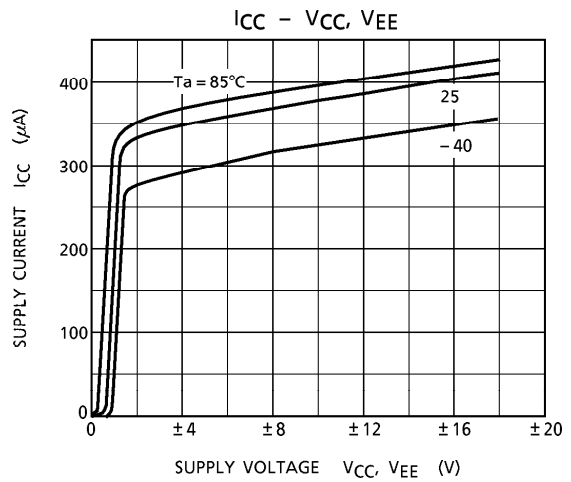
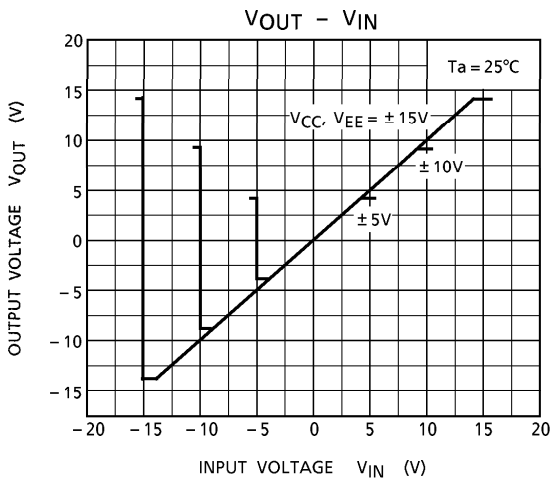
**ELECTRICAL CHARACTERISTICS** ( $V_{CC} = 15V$ ,  $V_{EE} = -15V$ ,  $T_a = 25^\circ C$ )

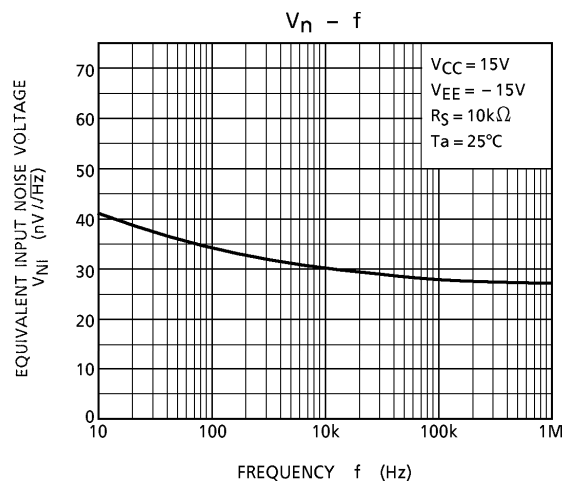
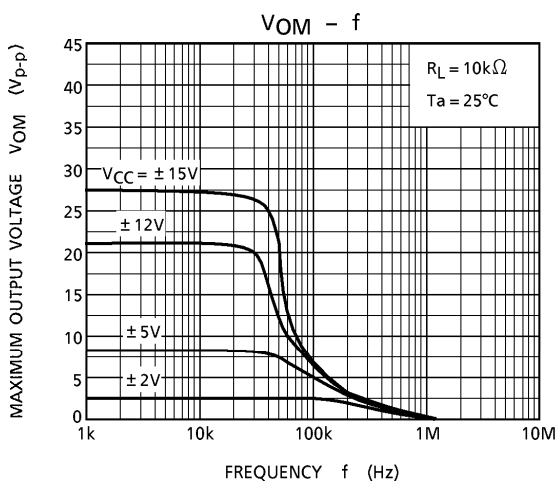
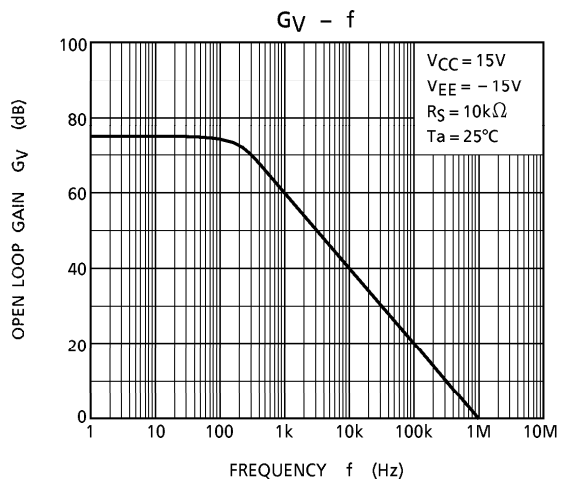
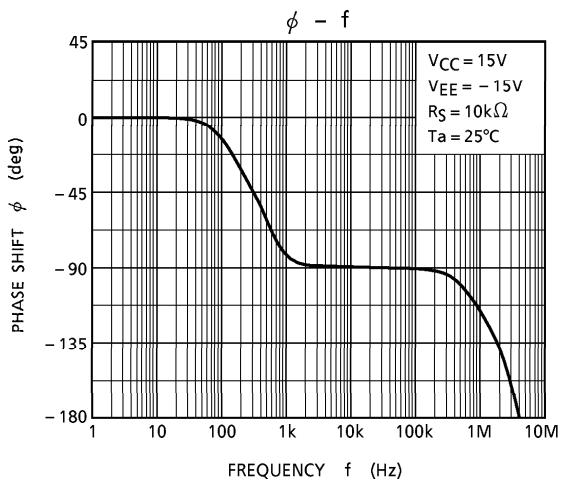
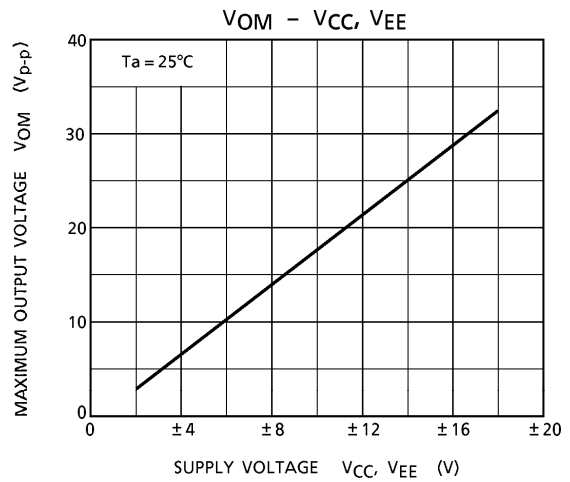
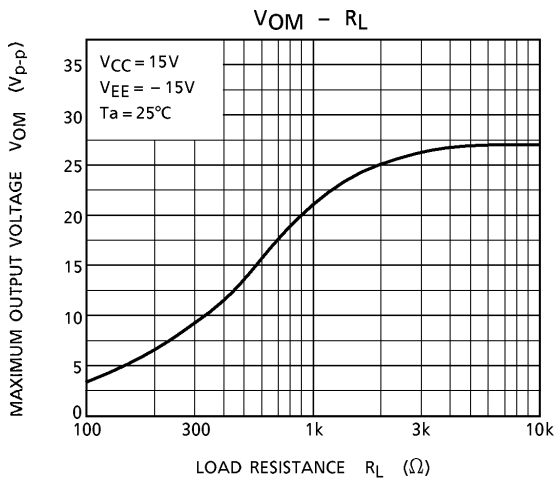
CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	$V_{IO}$	—	$R_g \leq 10k\Omega$	—	3	15	mV
TC Of Input Offset Voltage	$TCV_{IO}$	—	—	—	10	—	$\mu V / ^\circ C$
Input Offset Current	$I_{IO}$	—	—	—	5	200	pA
Input Bias Current	$I_I$	—	—	—	30	400	pA
Common Mode Input Voltage	$CMV_{IN}$	—	—	$\pm 11.5$	$\pm 12$	—	V
Maximum Output Voltage	$V_{OM}$	—	$R_L = 10k\Omega$	20	27	—	$V_{p-p}$
Voltage Gain (Open Loop)	$G_V$	—	$V_{OUT} = \pm 10V$ , $R_L = 10k\Omega$	3	6	—	V / mV
Unity Gain Cross Frequency	$f_T$	—	Open Loop, $R_L = 10k\Omega$	—	1	—	MHz
Input Resistance	$R_{IN}$	—	—	—	$10^{12}$	—	$\Omega$
Common Mode Input Signal Rejection Ratio	CMRR	—	$R_g \leq 10k\Omega$	70	76	—	dB
Supply Voltage Rejection Ratio	SVRR	—	$R_g \leq 10k\Omega$	70	76	—	dB
Supply Current	$I_{CC}$ , $I_{EE}$	—	Non load	—	400	500	$\mu A$
Cross Talk		—	—	—	-120	—	dB

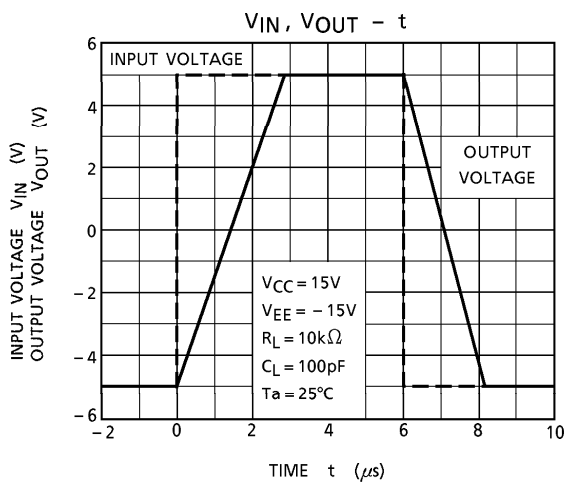
**OPERATING CHARACTERISTICS** ( $V_{CC} = 15V$ ,  $V_{EE} = -15V$ ,  $T_a = 25^\circ C$ )

CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Slew Rate	SR	—	$V_{IN} = 10V_{p-p}$ , $R_L = 10k\Omega$ $C_L = 100pF$	—	3.5	—	V / $\mu s$
Equivalent Input Noise Voltage	$V_n$	—	$R_S = 100\Omega$ , $f = 1kHz$	—	42	—	$nV / \sqrt{Hz}$

CHARACTERISTICS

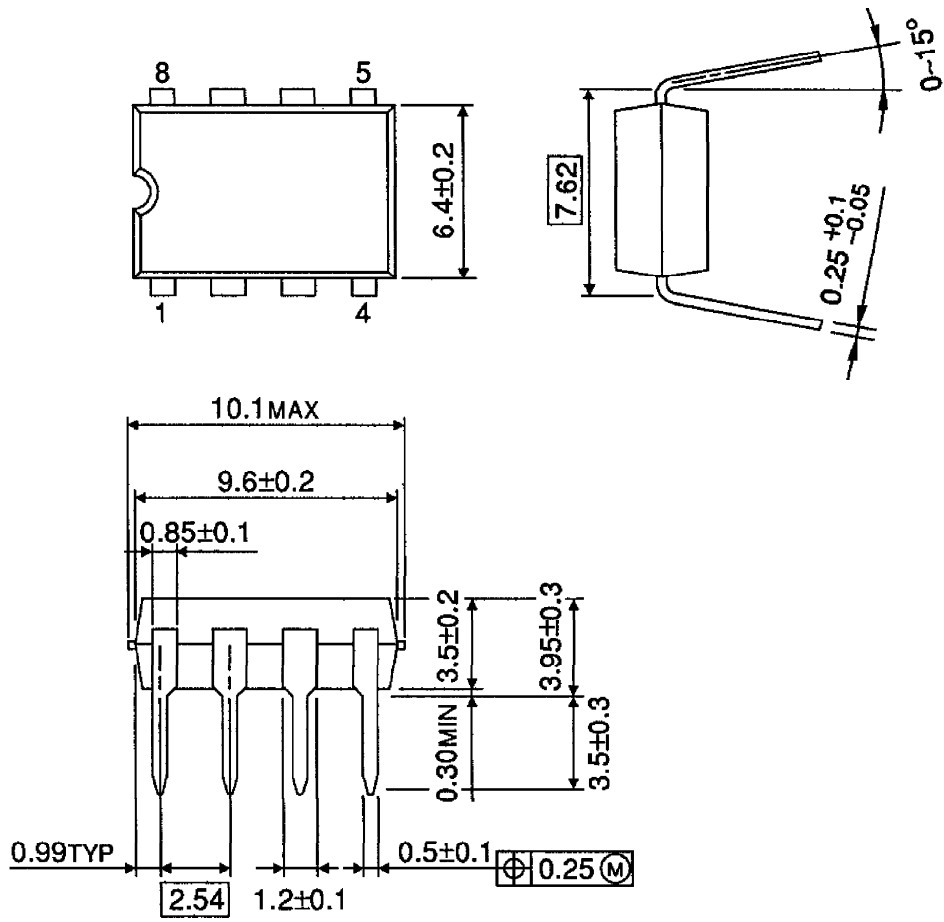






OUTLINE DRAWING  
DIP8-P-300-2.54A

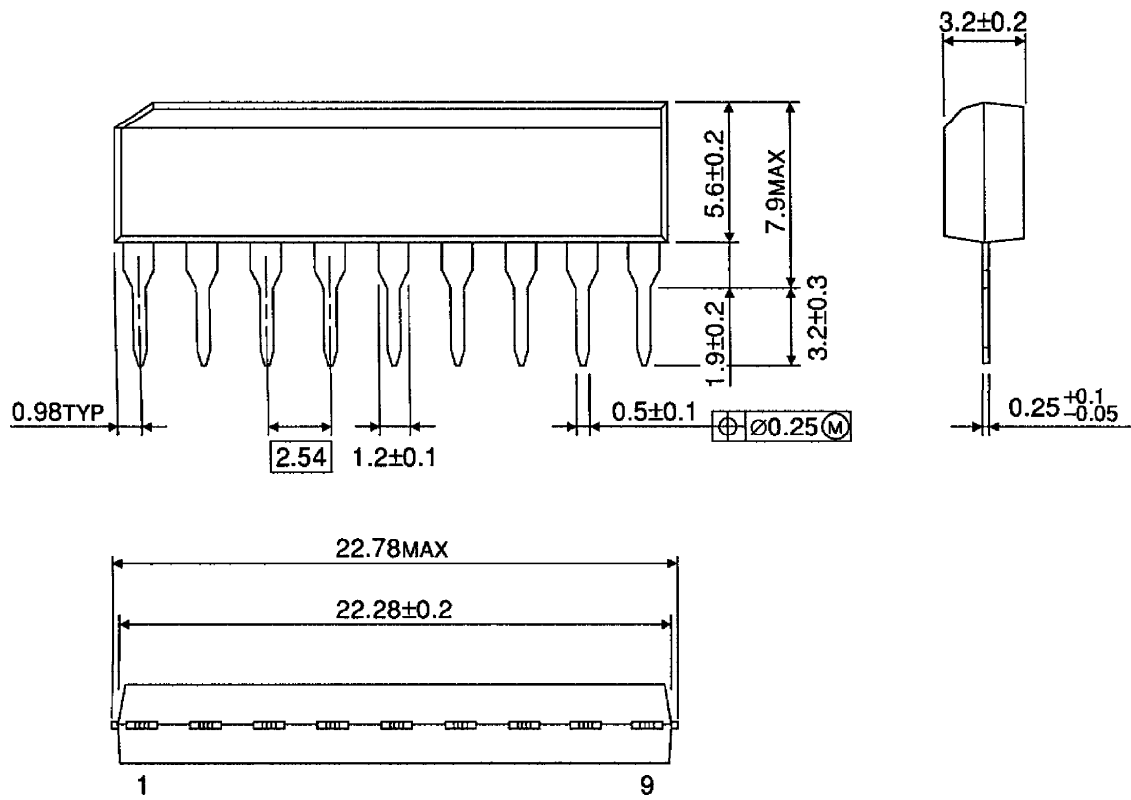
Unit : mm



Weight : 0.5g (Typ.)

**OUTLINE DRAWING**  
SIP9-P-2.54A

Unit : mm

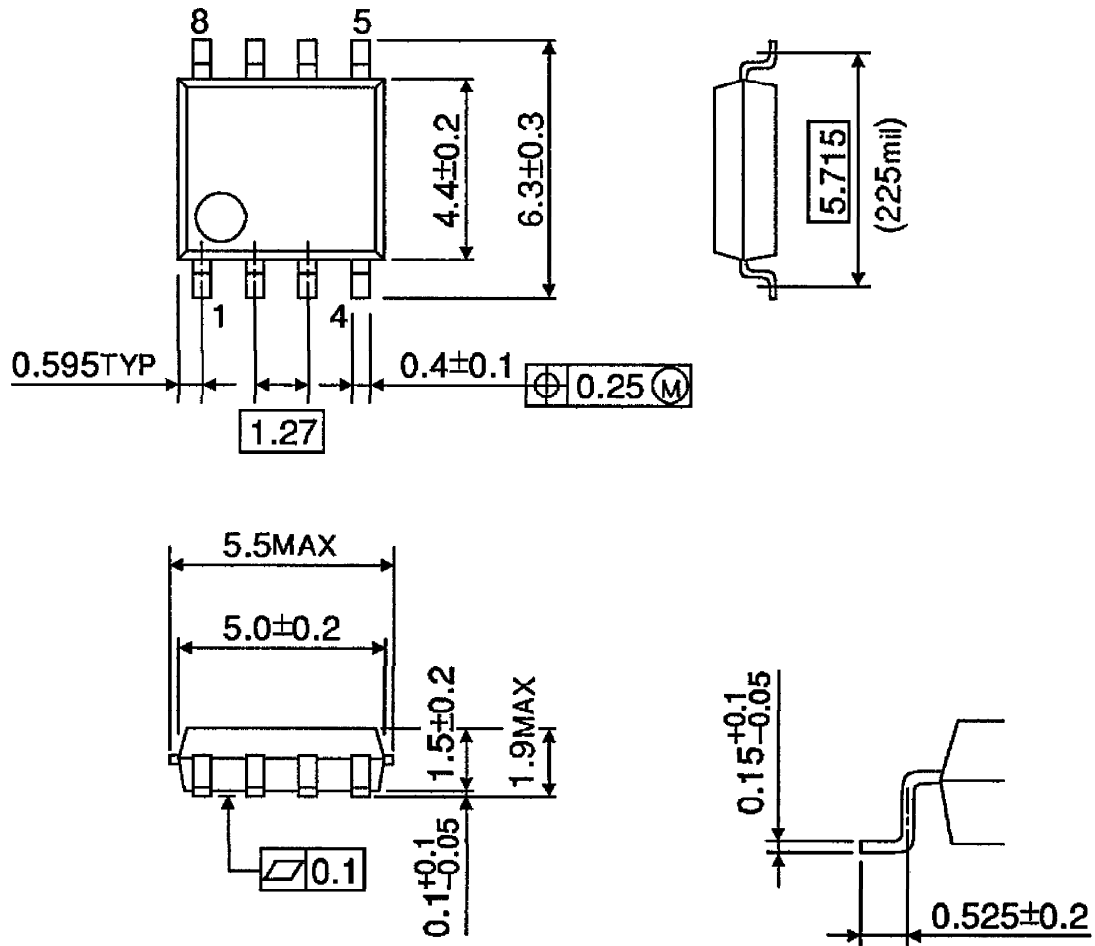


Weight : 0.9g (Typ.)



OUTLINE DRAWING  
SOP8-P-225-1.27

Unit : mm



Weight : 0.1g (Typ.)