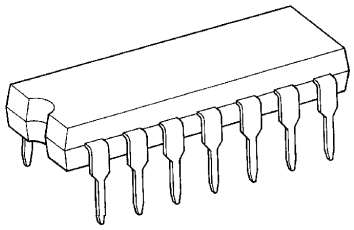
TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA75064P, TA75064F

QUAD OPERTIONAL AMPLIFIER

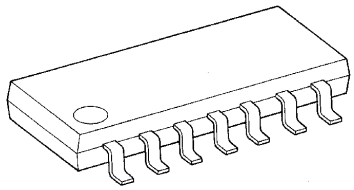
The TA75064P and TA75064F are J-FET input low-power operational amplifiers with low input bias and offset current and fast slew rate.
The TA75064P is pin compatible with the TA75902P and 324. The TA75064F is mini-flat package.
The TA75064P series are excellent choice for active filters, integrators, buffers and sample-and-hold circuits.

TA75064P



DIP14-P-300-2.54

TA75064F



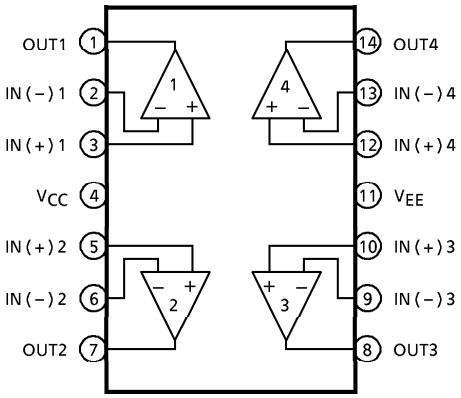
SOP14-P-225-1.27

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

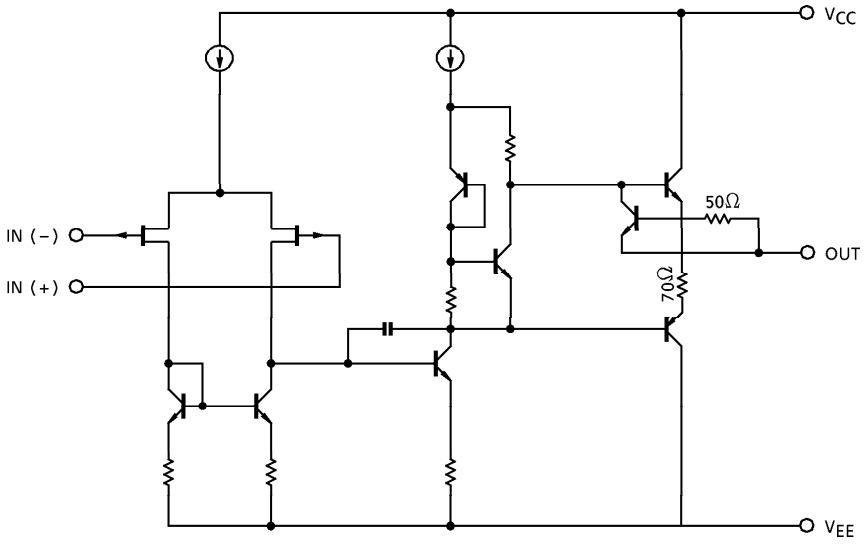
FEATURES

- Low Supply Current : 1.0mA Max.
- Low Input Bias Current : 400pA Max.
- Low Input Offset Current : 200pA Max.
- High Slew Rate : 3.5V / μs
- Wide Supply Voltage Range : ±2~±18V
- Internal Frequency Compensation
- Output Short Circuit Protection

PIN CONNECTION (TOP VIEW)



EQUIVALENT CIRCUIT



MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Supply Voltage		V_{CC}	18	V
		V_{EE}	− 18	
Differential Input Voltage		DV_{IN}	± 30	V
Input Voltage		V_{IN}	± 15	V
Power Dissipation	TA75064P	P_D	625	mW
	TA75064F		280	
Operating Temperature		T_{opr}	− 40~85	°C
Storage Temperature		T_{stg}	− 55~125	°C

ELECTRICAL CHARACTERISTICS (V_{CC} = 15V, V_{EE} = − 15V, Ta = 25°C)

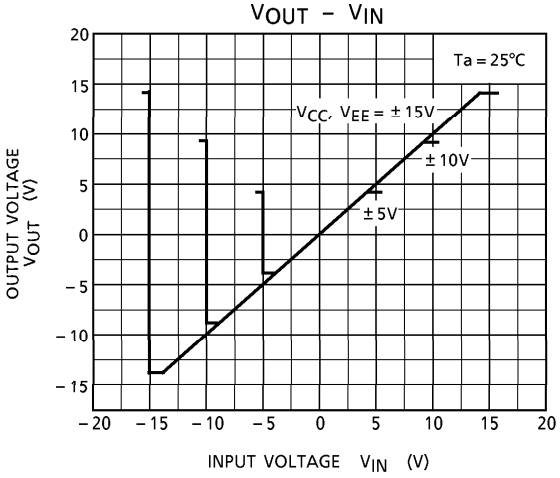
CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V_{IO}	—	$R_g \leqq 10k\Omega$	—	3	15	mV
TC of Input Offset Voltage	TCV_{IO}	—	—	—	10	—	μV / °C
Input Offset Current	I_{IO}	—	—	—	5	200	pA
Input Bias Current	I_I	—	—	—	30	400	pA
Common Mode Input Voltage	CMV_{IN}	—	—	± 11.5	± 12	—	V
Maximum Output Voltage	V_{OM}	—	$R_L = 10k\Omega$	20	27	—	V_{p-p}
Voltage Gain (Open Loop)	G_V	—	V_{OUT} = ± 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}	—	Ω
Common Mode Input Signal Rejection Ratio	CMRR	—	$R_g \leqq 10k\Omega$	70	76	—	dB
Supply Voltage Rejection Ratio	SVRR	—	$R_g \leqq 10k\Omega$	70	76	—	dB
Supply Current	I_{CC}, I_{EE}	—	Non load	—	800	1000	μA
Cross Talk		—	—	—	− 120	—	dB

OPERATING CHARACTERISTICS (V_{CC} = 15V, V_{EE} = − 15V, Ta = 25°C)

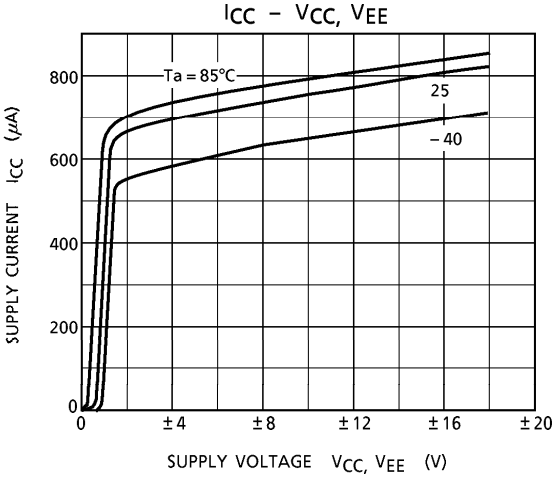
CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Slew Rate	SR	—	$V_{IN} = 10V_{p-p}$, $R_L = 10k\Omega$, $C_L = 100pF$	—	3.5	—	V / μs
Equivalent Input Noise Voltage	V_n	—	$R_S = 100\Omega$, f = 1kHz	—	42	—	nV / $\sqrt{Hz}$

CHARACTERISTIC

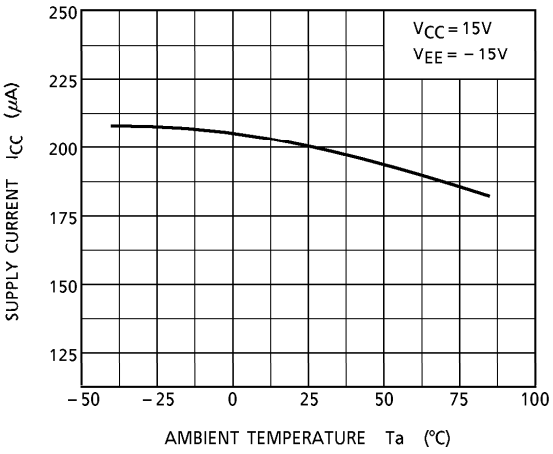
V_{OUT} – V_{IN}



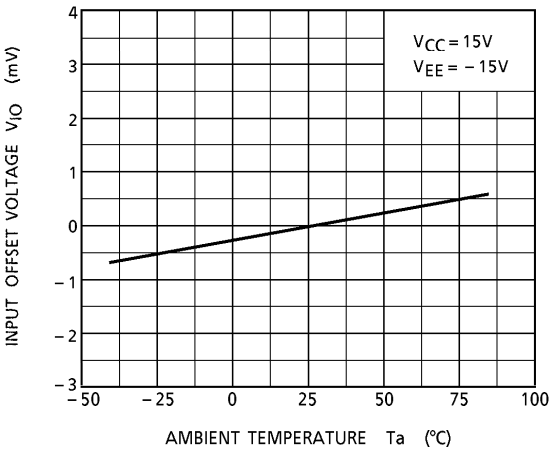
I_{CC} – V_{CC}, V_{EE}



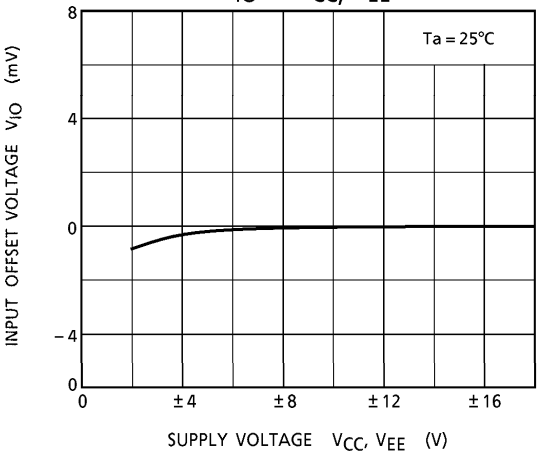
I_{CC} – Ta



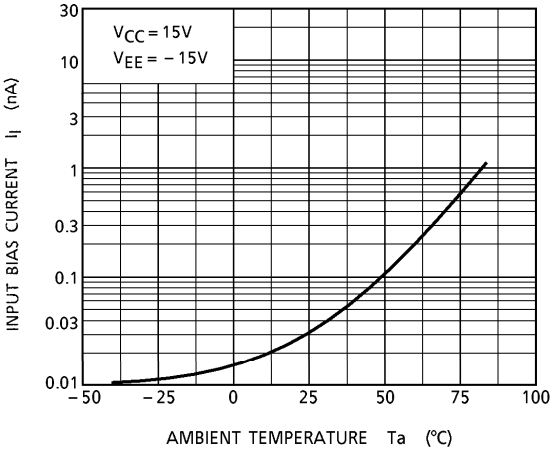
V_{IO} – Ta



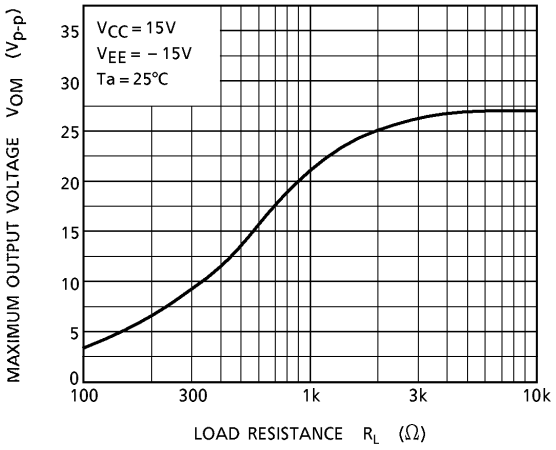
V_{IO} – V_{CC}, V_{EE}



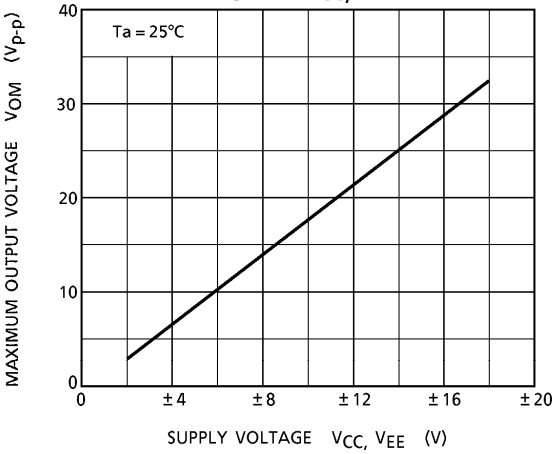
I_I – Ta



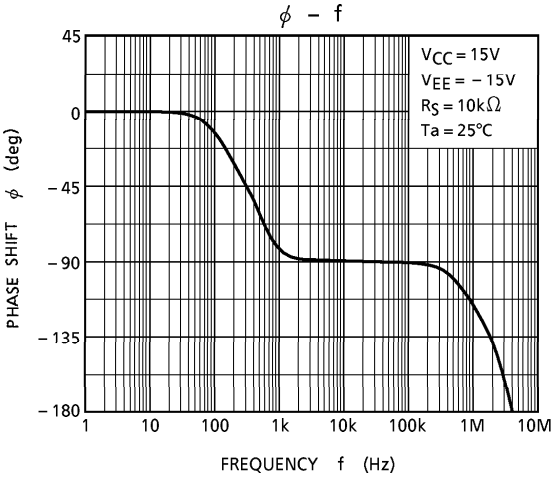
V_{OM} – R_L



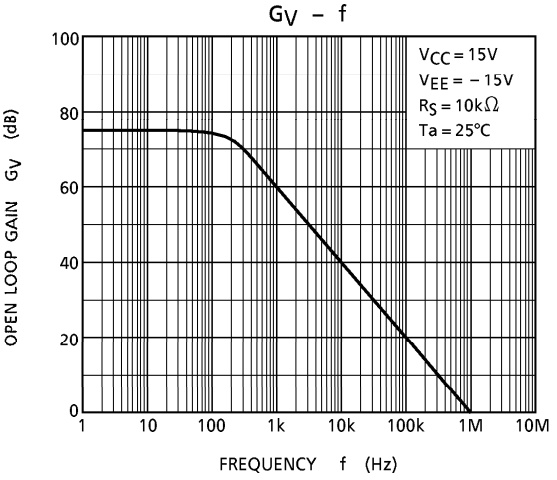
V_{OM} – V_{CC}, V_{EE}



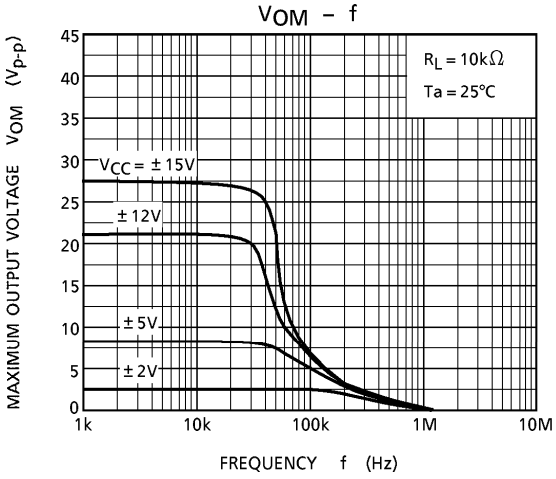
ϕ – f



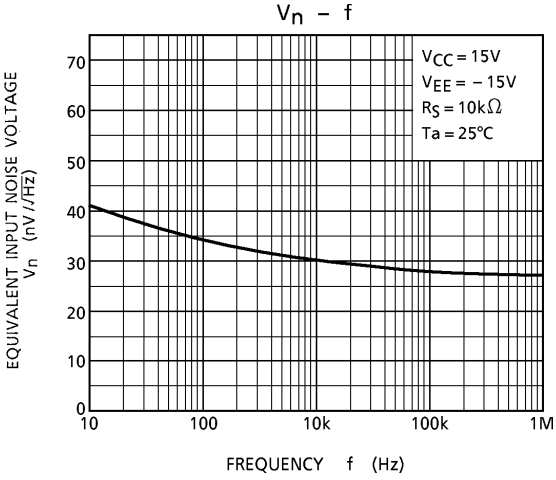
G_V – f

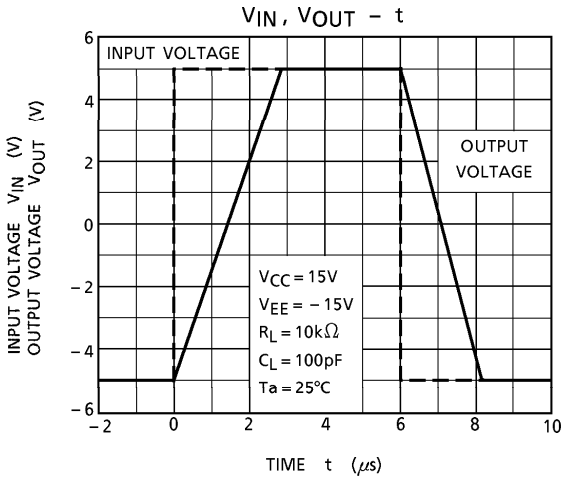


V_{OM} – f



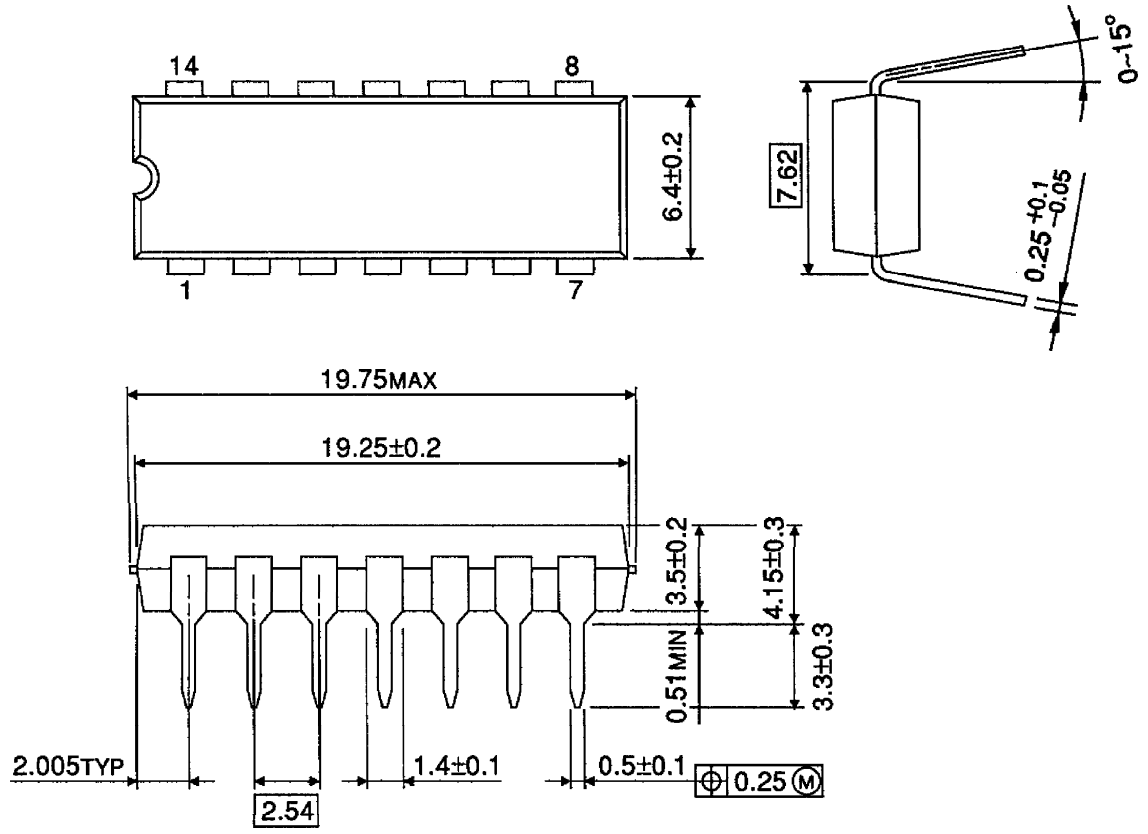
V_n – f




V_{IN}, V_{OUT} – t
INPUT VOLTAGE
OUTPUT VOLTAGE
V_{CC} = 15V
V_{EE} = – 15V
R_L = 10kΩ
C_L = 100pF
Ta = 25°C
INPUT VOLTAGE V_{IN} (V)
OUTPUT VOLTAGE V_{OUT} (V)
TIME t (μs)
6
4
2
0
– 2
– 4
– 6
– 2
0
2
4
6
8
10

OUTLINE DRAWING

DIP14-P-300-2.54 Unit : mm

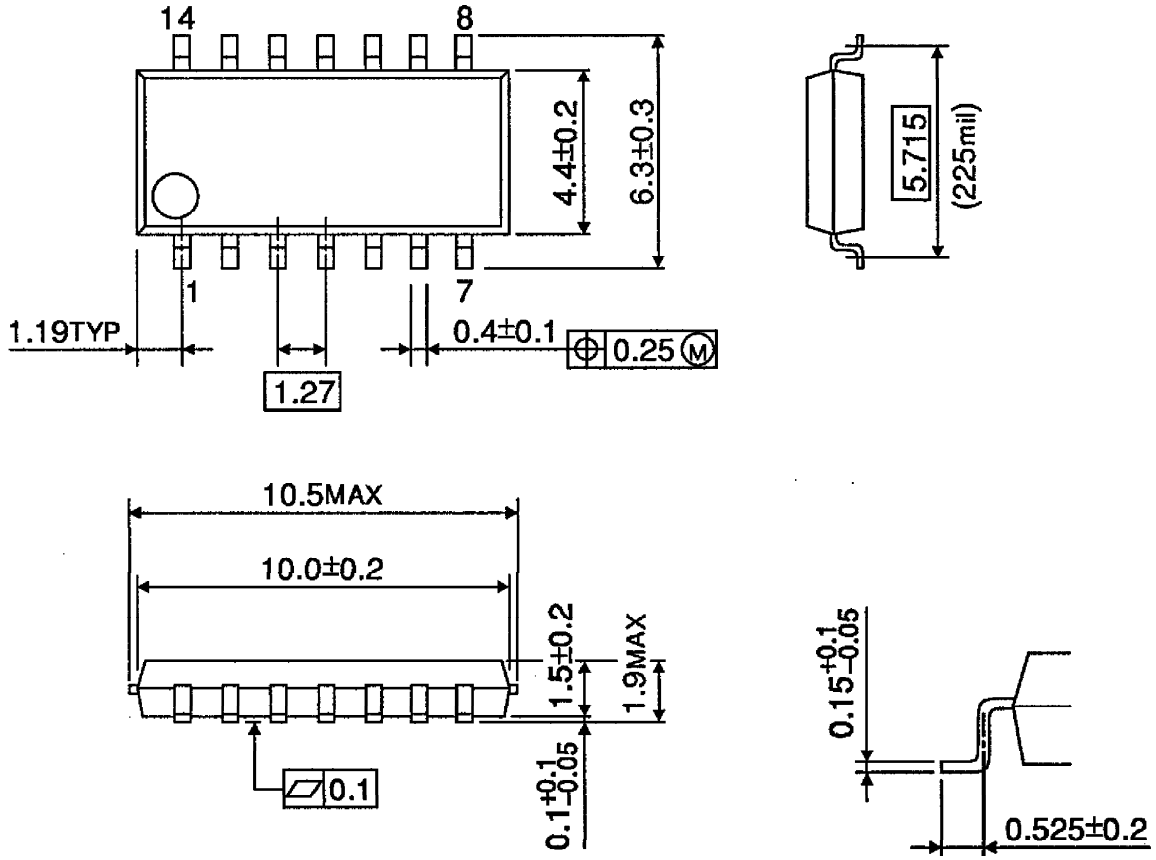


Weight : 1.0g (Typ.)

OUTLINE DRAWING

SOP14-P-225-1.27

Unit : mm



Weight : 0.2g (Typ.)