

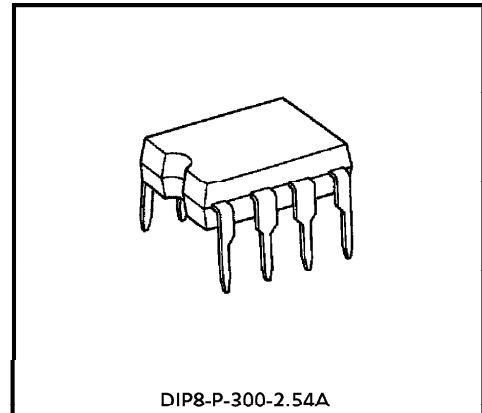
TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA75254P

SINGLE OPERATIONAL AMPLIFIER

The TA75254P monolithic instrumentation operational amplifier combined superlative performance in low signal level applications and has low input offset voltage and bias current combined with very high levels of gain, input impedance, CMRR and SVRR.

The TA75254P is an excellent choice for a wide variety of applications including strain gauge and thermocouple bridges, high gain active filters, integrators and sample-and-hold amplifiers.

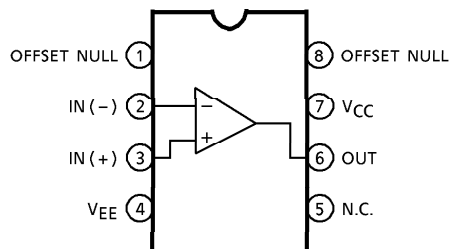


Weight : 0.5g (Typ.)

FEATURES

- Low Input Offset Voltage : 1.3mV MAX.
- Low Input Offset Voltage Drift : $1.5\mu\text{V}/^\circ\text{C}$
- Low Input Bias Current : 30nA MAX.
- Low Input Offset Current : 10nA MAX.
- Internally Frequency Compensation
- Offset Nulling Capability
- Supply Voltage : $\pm 3 \sim \pm 18\text{V}$

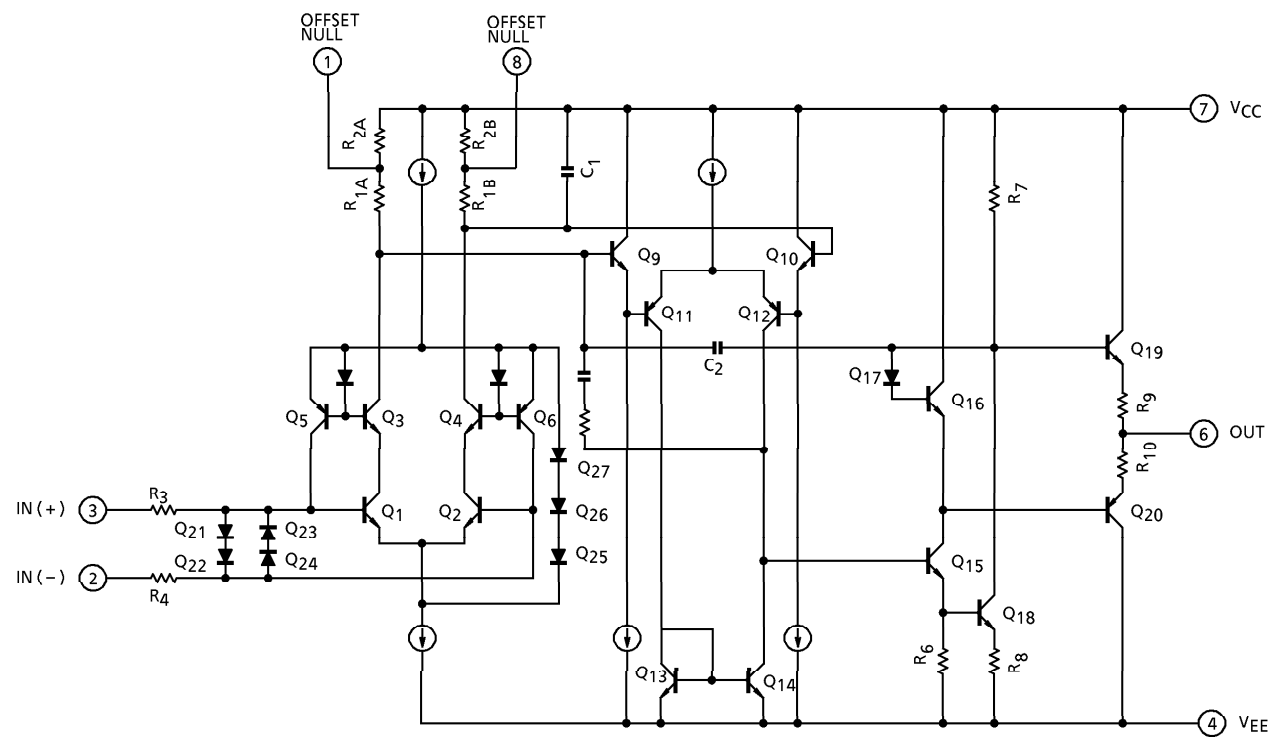
PIN CONNECTION (TOP VIEW)



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EQUIVALENT CIRCUIT



MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

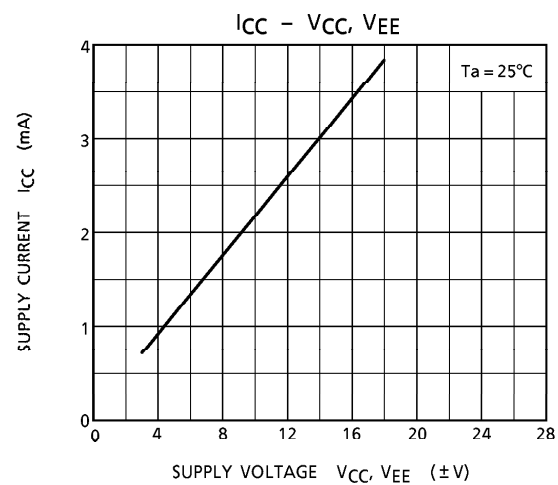
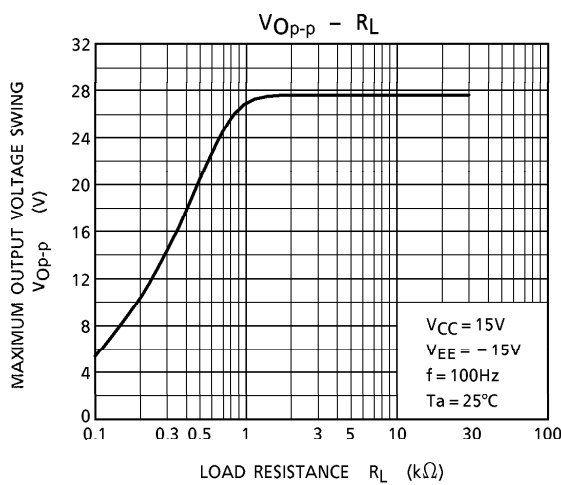
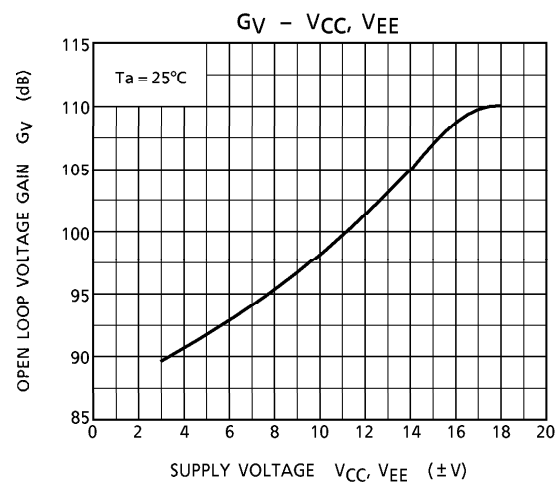
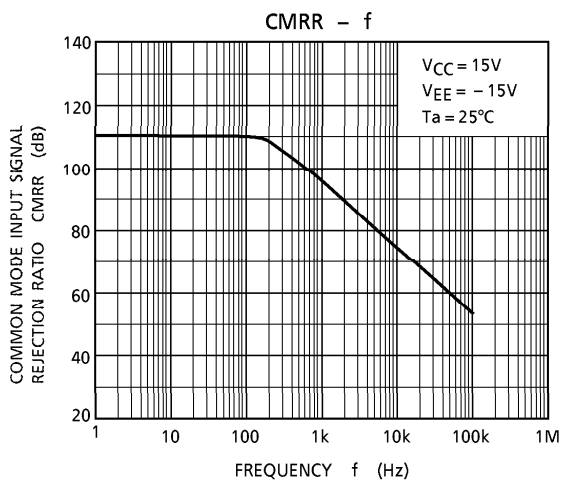
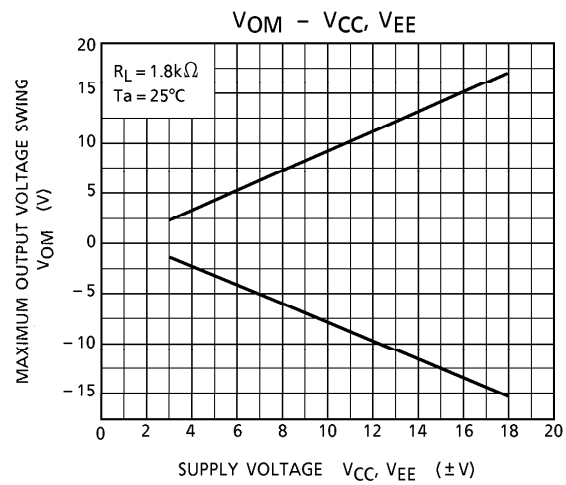
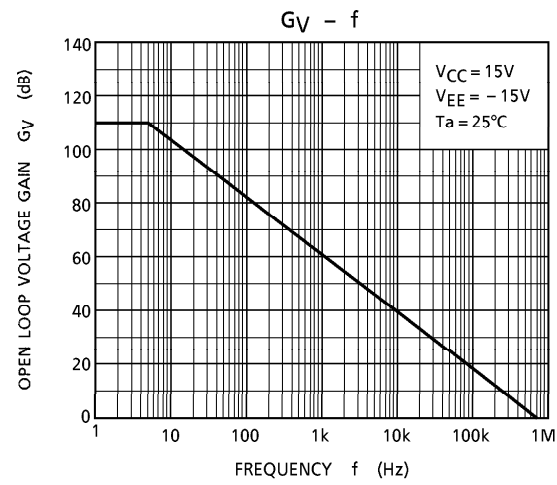
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}, V_{EE}	18, - 18	V
Differential Voltage	DV_{IN}	± 12	V
Input Voltage	V_{IN}	$V_{CC} \sim V_{EE}$	V
Power Dissipation	P_D	500	mW
Operating Temperature	T_{opr}	- 40~85	$^\circ\text{C}$
Storage Temperature	T_{stg}	- 55~125	$^\circ\text{C}$

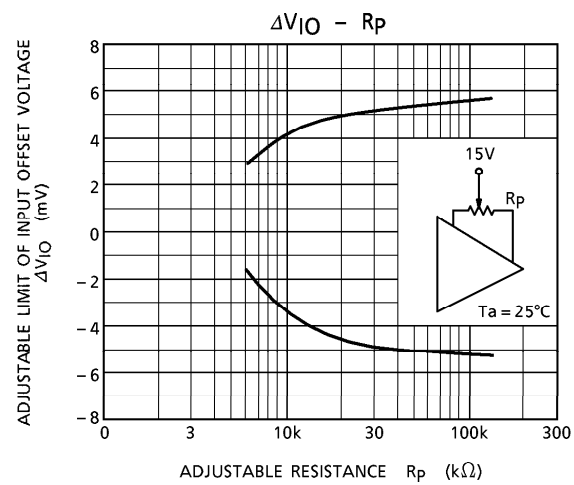
ELECTRICAL CHARACTERISTICS ($V_{CC} = 15\text{V}$, $V_{EE} = -15\text{V}$, $T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V_{IO}	—	$R_g \leq 10\text{k}\Omega$	—	0.3	1.3	mV
Input Offset Current	I_{IO}	—	—	—	0.3	10	nA
Input Bias Current	I_I	—	—	- 30	—	30	nA
Common Mode Input Voltage	CMV_{IN}	—	—	± 13	± 14	—	V
Maximum Output Voltage	V_{OM}	—	$R_L = 10\text{k}\Omega$	± 12	± 13	—	V
	V_{OMR}		$R_L = 2\text{k}\Omega$	± 11.5	± 12.8	—	
Source Current	I_{source}	—	—	10	25	—	mA
Sink Current	I_{sink}	—	—	10	25	—	mA
Open Loop Voltage Gain	G_V	—	$R_L \geq 2\text{k}\Omega$	86	110	—	dB
Common Mode Input Signal Rejection Ratio	CMRR	—	$R_g \leq 10\text{k}\Omega$	70	110	—	dB
Supply Voltage Rejection Ratio	SVRR	—	$R_g = 10\text{k}\Omega$	80	110	—	dB
Slew Rate	SR	—	—	—	0.2	—	V / μs
Unity Gain Cross Frequency	f_T	—	—	—	0.5	—	MHz
Supply Current	I_{CC}, I_{EE}	—	—	—	3.2	6.0	mA
Input Noise Voltage	V_{NI}	—	—	—	1	—	μV_{rms}
Input Resistance	R_{IN}	—	—	—	50	—	M Ω
TC Of Input Offset Voltage (Note 1)	$\Delta V_{IO} / \Delta T$	—	$R_g \leq 10\text{k}\Omega$, unnull	—	1.2	4.5	$\mu\text{V} / ^\circ\text{C}$
		—	$R_g \leq 10\text{k}\Omega$, null, $R_p = 20\text{k}\Omega$	—	0.4	1.5	
TC Of Input Bias Current	$\Delta I_I / \Delta T$	—	—	—	18	—	PA / $^\circ\text{C}$
TC Of Input Offset Current	$\Delta I_{IO} / \Delta T$	—	—	—	12	—	PA / $^\circ\text{C}$

(Note 1) Sample Tested (LTPD10)

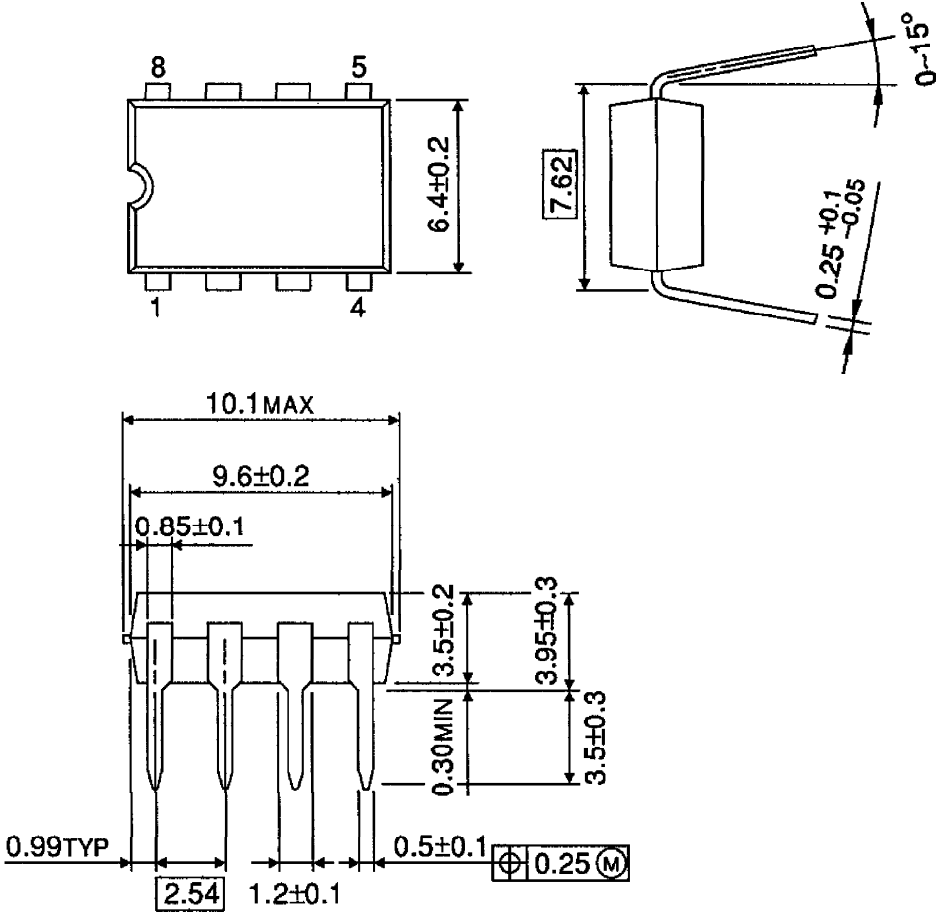
CHARACTERISTICS





OUTLINE DRAWING
DIP8-P-300-2.54A

Unit : mm



Weight : 0.5g (Typ.)