

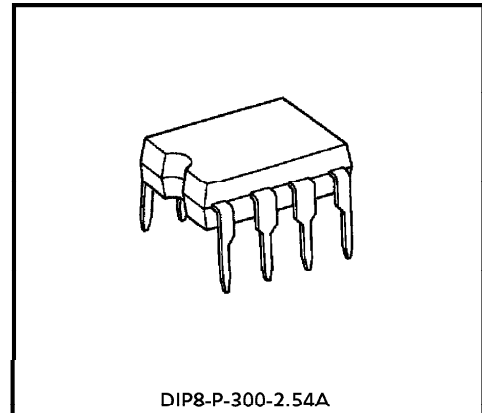
TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

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.

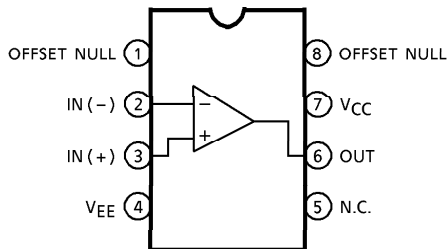


Weight : 0.5g (Typ.)

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 : $\pm 3\sim\pm 18\text{V}$

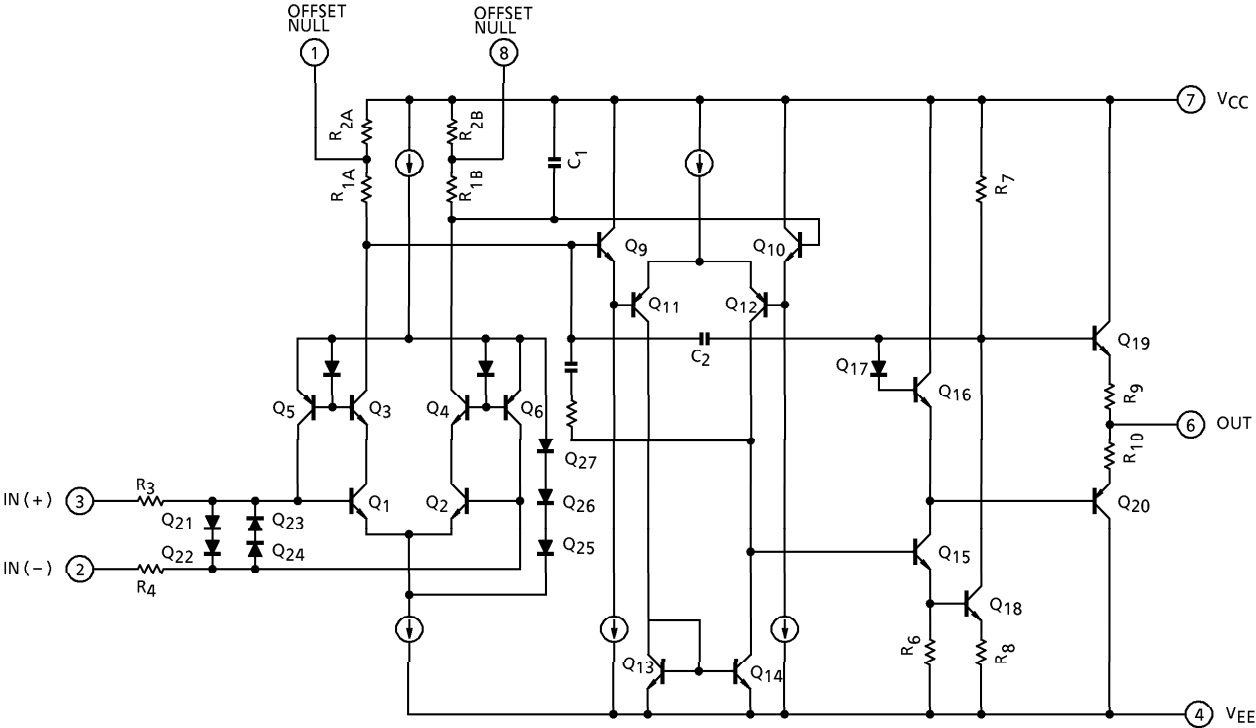
PIN CONNECTION (TOP VIEW)



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EQUIVALENT CIRCUIT



MAXIMUM RATINGS (Ta = 25°C)

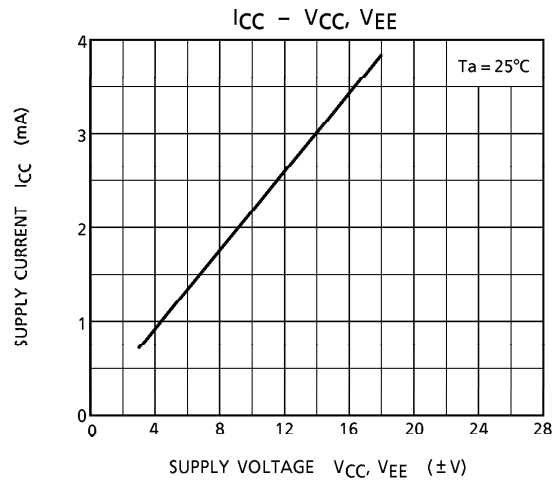
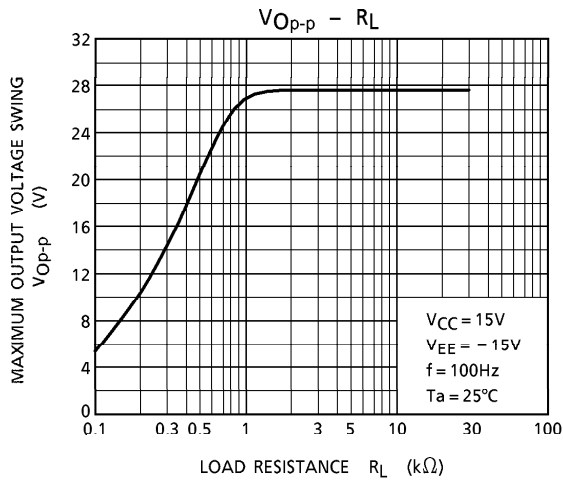
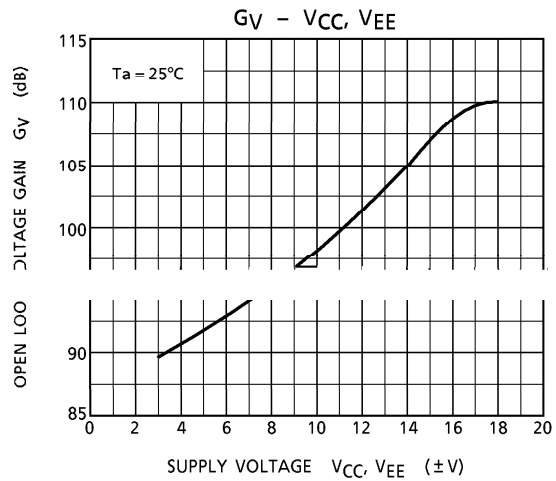
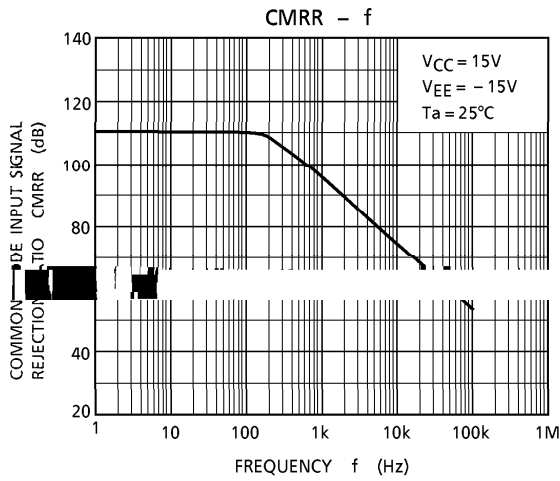
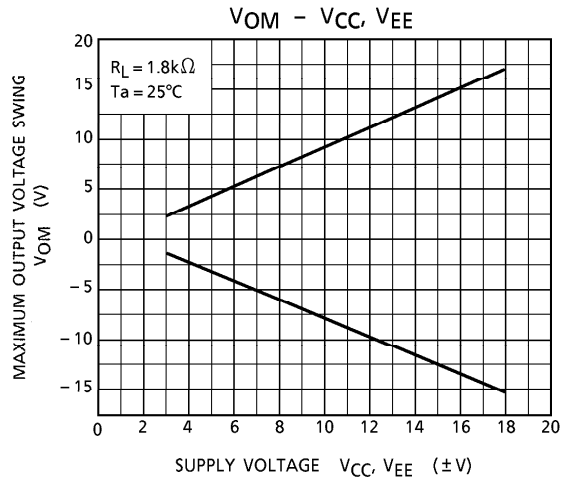
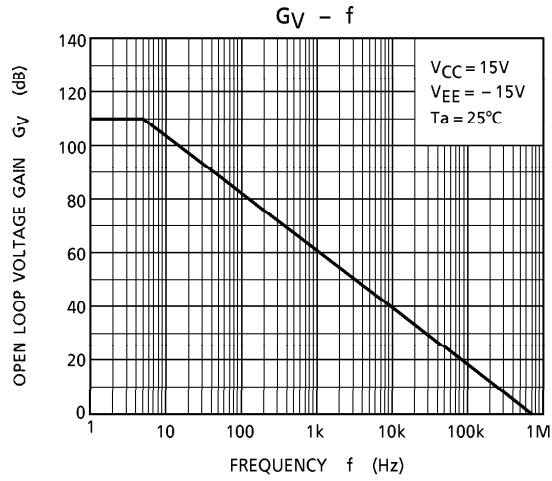
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{CC} , V _{EE}	18, -18	V
Differential Voltage	DV _{IN}	±12	V
Input Voltage	V _{IN}	V _{CC} ~V _{EE}	V
Power Dissipation	P _D	500	mW
Operating Temperature	T _{opr}	-40~85	°C
Storage Temperature	T _{stg}	-55~125	°C

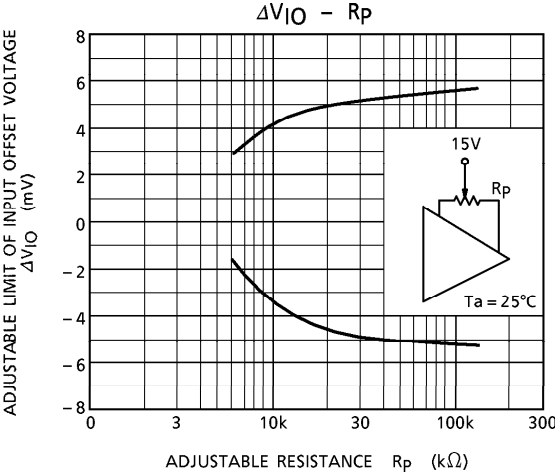
ELECTRICAL CHARACTERISTICS (V_{CC} = 15V, V_{EE} = -15V, Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V _{IO}	—	R _g ≤ 10kΩ	—	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 = 10kΩ	±12	±13	—	V
	V _{OMR}		R _L = 2kΩ	±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 ≥ 2kΩ	86	110	—	dB
Common Mode Input Signal Rejection Ratio	CMRR	—	R _g ≤ 10kΩ	70	110	—	dB
Supply Voltage Rejection Ratio	SVRR	—	R _g = 10kΩ	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	—	MΩ
TC Of Input Offset Voltage (Note 1)	ΔV _{IO} / ΔT	—	R _g ≤ 10kΩ, unnull	—	1.2	4.5	μV / °C
		—	R _g ≤ 10kΩ, null, R _p = 20kΩ	—	0.4	1.5	
TC Of Input Bias Current	ΔI _I / ΔT	—	—	—	18	—	PA / °C
TC Of Input Offset Current	ΔI _{IO} / ΔT	—	—	—	12	—	PA / °C

(Note 1) Sample Tested (LTPD10)

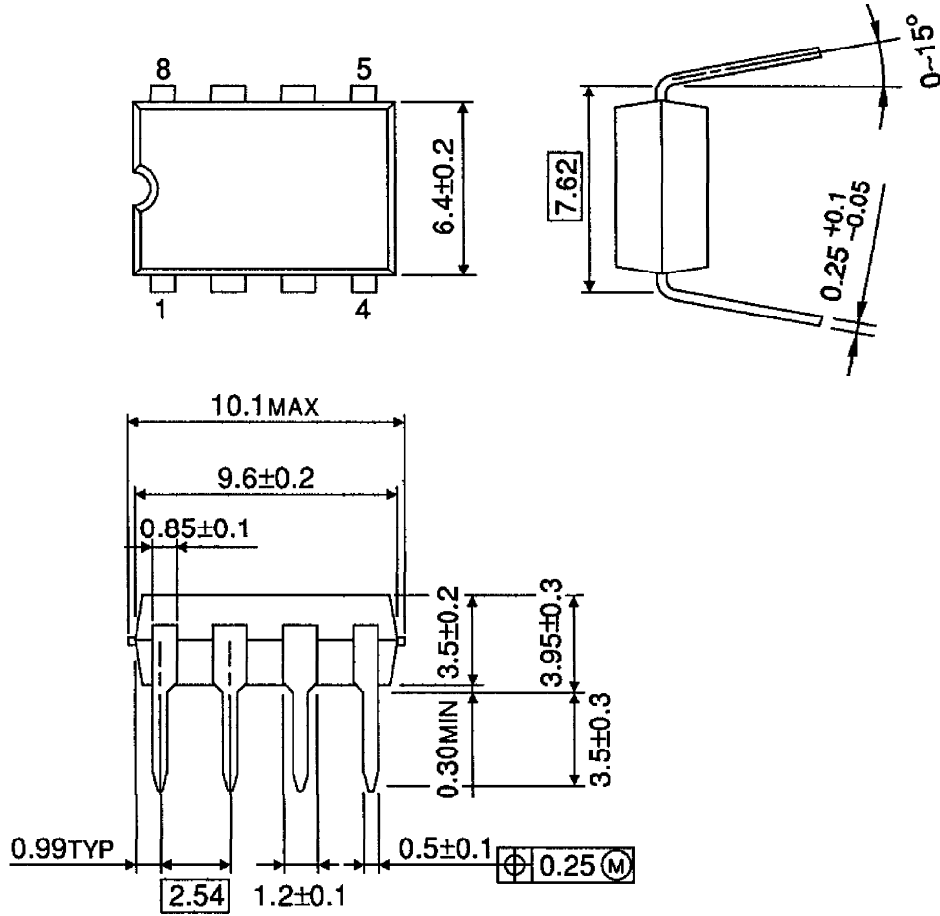
CHARACTERISTICS





OUTLINE DRAWING
DIP8-P-300-2.54A

Unit : mm



Weight : 0.5g (Typ.)