

TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA7330P, TA7330F

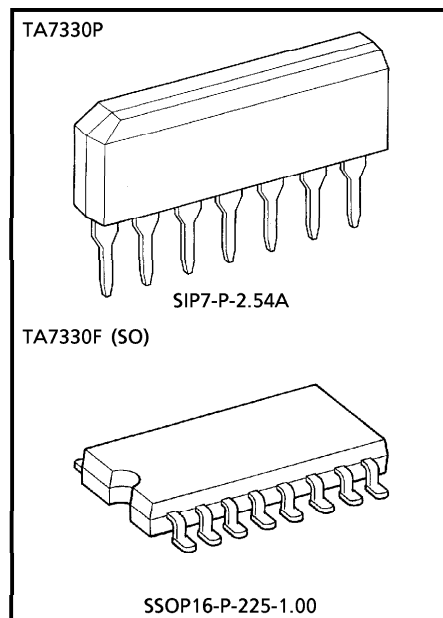
PREAMPLIFIER WITH ALC CIRCUIT FOR MINI / MICRO CASSETTE TAPE RECORDER

The TA7330P and TA7330F are preamplifier for 3V or 4.5V battery use.

It consists of low noise preamplifier and ALC (Automatic Level Control) circuit, and is suitable for mini / micro cassette tape recorder applications.

FEATURES

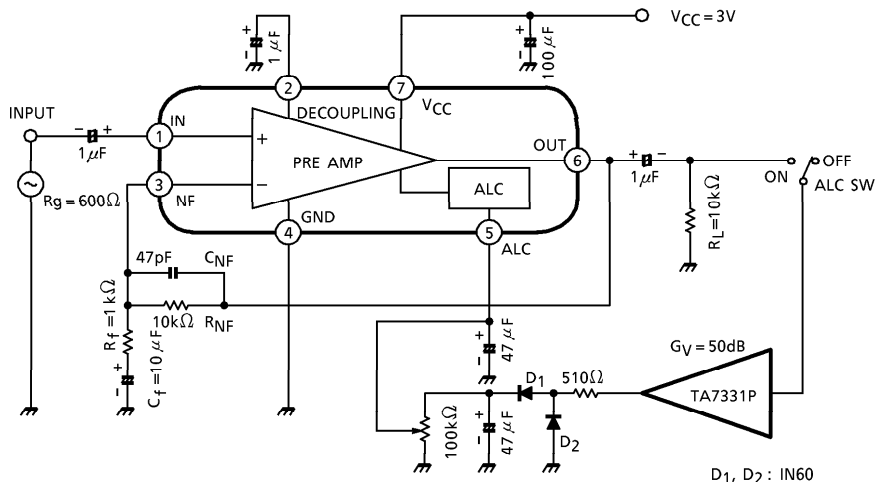
- Low supply voltage use : $V_{CC(opr)} = 2 \sim 5V$ ($T_a = 25^\circ C$)
- Low noise : $V_{ni} = 1 \mu V_{rms}$ (Typ.)
- Wide ALC range : $W_{ALC} = 40dB$ (Typ.)
- Low quiescent current : $I_{CCQ} = 0.75mA$ (Typ.) ($V_{CC} = 3V, T_a = 25^\circ C$)
- TA7330F (SO) is standard model of flat package.



Weight
 SIP7-P-2.54A : 0.72g (Typ.)
 SSOP16-P-225-1.00 : 0.14g (Typ.)

TEST CIRCUIT / BLOCK DIAGRAM

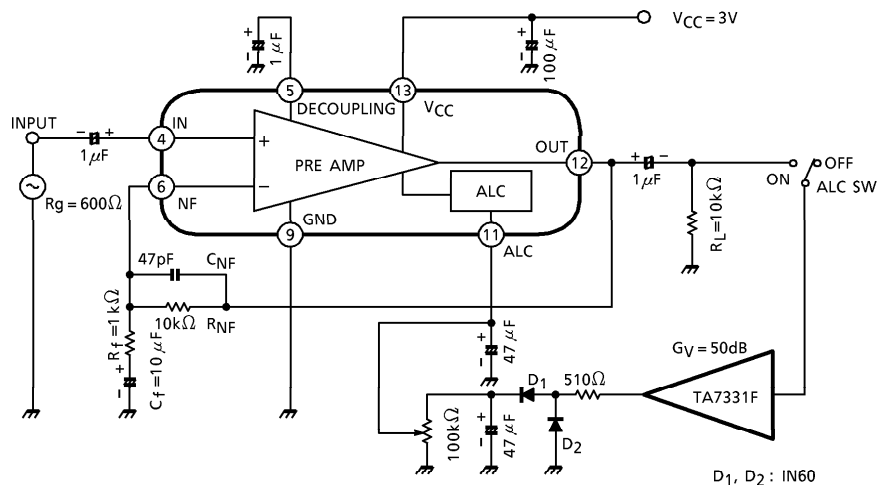
TA7330P



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● 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.

TA7330F



MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Supply Voltage		V _{CC}	8	V
Operating Supply Voltage		V _{CC}	5	V
Power Dissipation	TA7330P	P _D (Note)	400	mW
	TA7330F		350	
Operating Temperature	TA7330P	T _{opr}	-25~75	°C
	TA7330F		-25~60	
Storage Temperature		T _{stg}	-55~150	°C

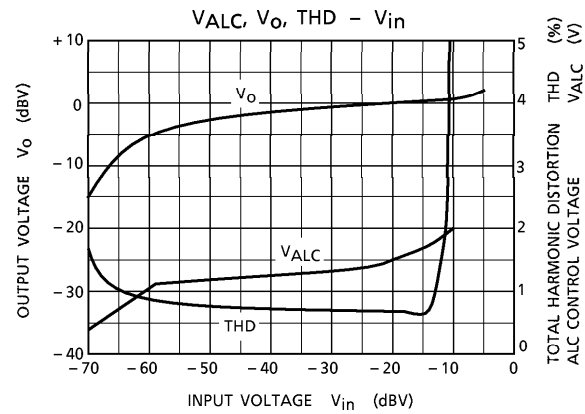
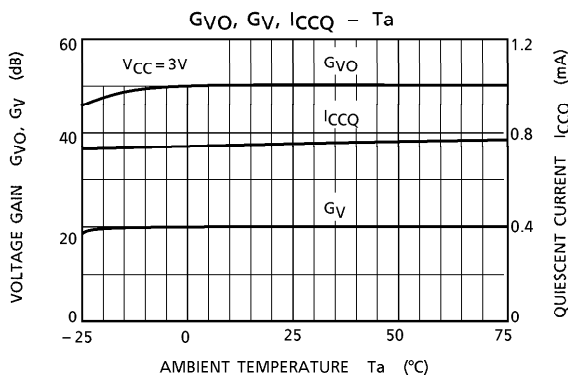
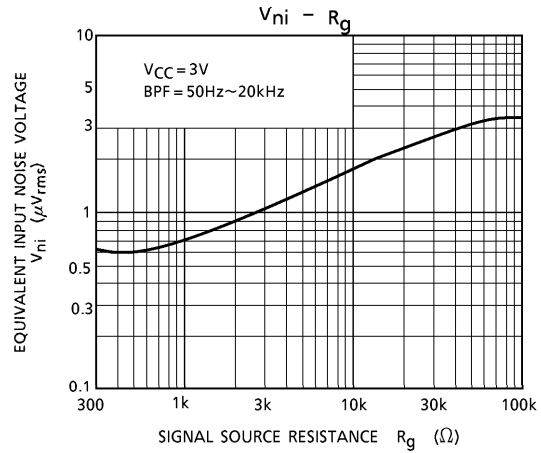
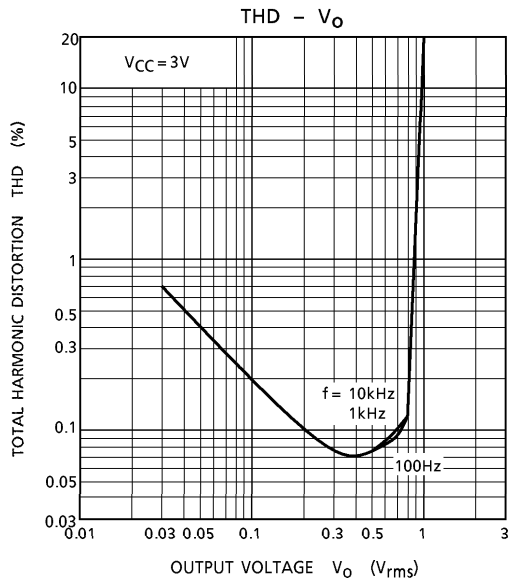
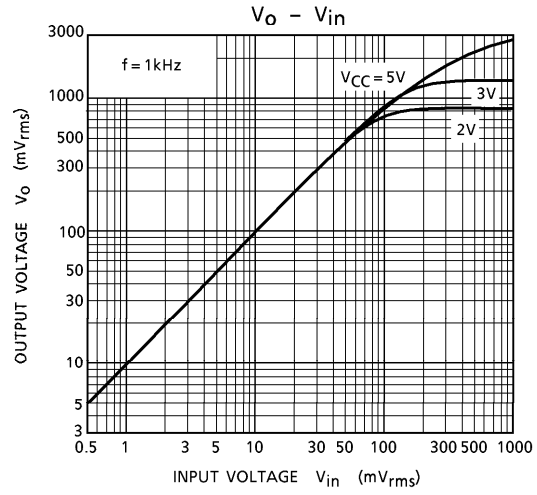
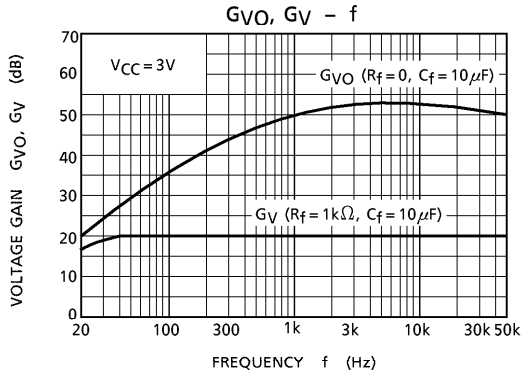
(Note) Derated above Ta = 25°C in the proportion of 3.2mW/°C for the TA7330P and 2.8mW/°C for the TA7330F.

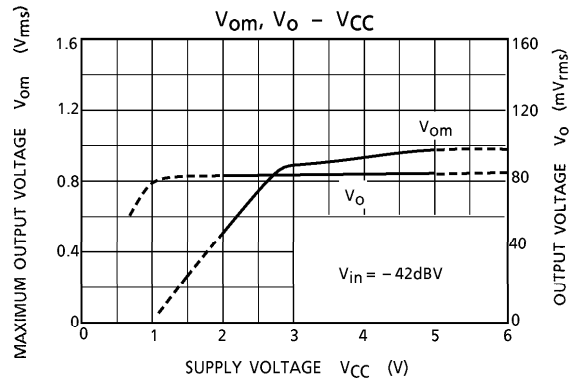
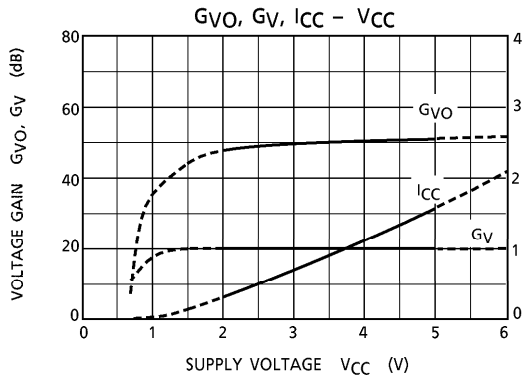
ELECTRICAL CHARACTERISTICS (Unless otherwise specified, V_{CC} = 3V, Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Quiescent Current	I _{CCQ} (1)	—	—	—	0.75	1	mA
	I _{CCQ} (2)	—	V _{CC} = 4.5V	—	1.38	1.8	
Open Loop Voltage Gain	G _{VO}	—	f = 1kHz	40	50	—	dB
Closed Loop Voltage Gain	G _V	—	f = 1kHz, R _{NF} = 10kΩ R _f = 1kΩ, R _L = 10kΩ	—	20	—	dB
Maximum Output Voltage	V _{om}	—	f = 1kHz, THD = 1%, R _L = 10kΩ	0.5	0.9	—	V _{rms}
Input Resistance	R _{IN}	—	f = 1kHz, R _{NF} = 10kΩ, R _f = 1kΩ	—	30	—	kΩ
Equivalent Input Noise Voltage	V _{ni}	—	R _g = 2.2kΩ, BPF = 50Hz~20kHz	—	1.0	2.5	µV _{rms}
ALC Range	W _{ALC}	—	f = 1kHz, ALC ON	—	40	—	dB

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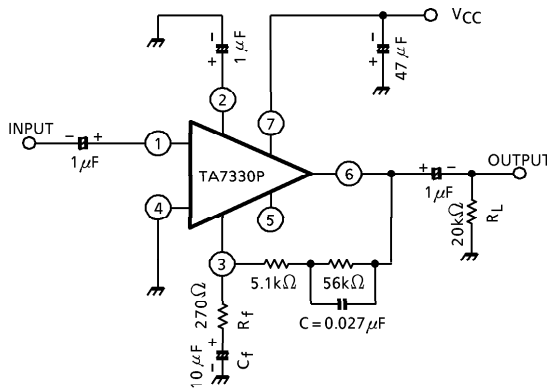
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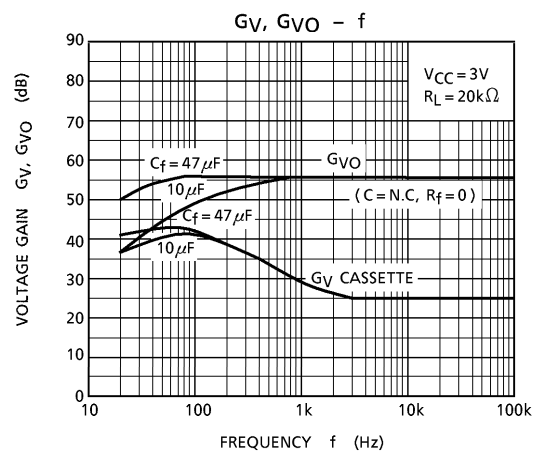
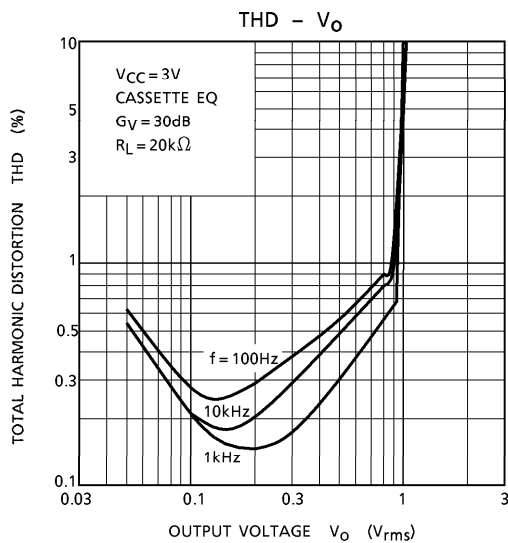
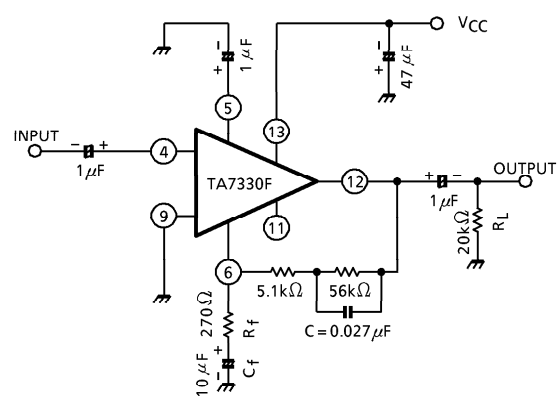


APPLICATION CIRCUIT CASSETTE EQUALIZER

TA7330P

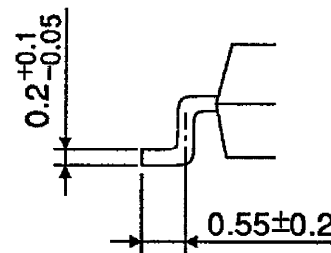
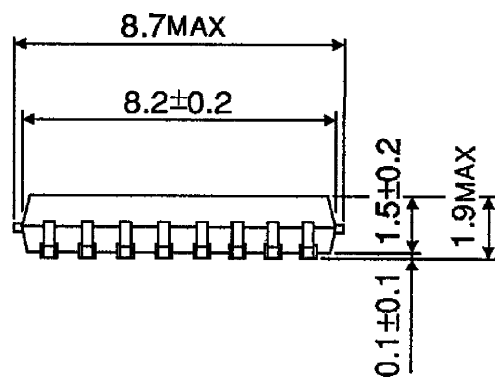
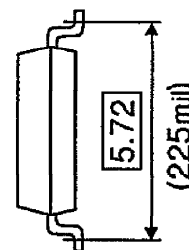
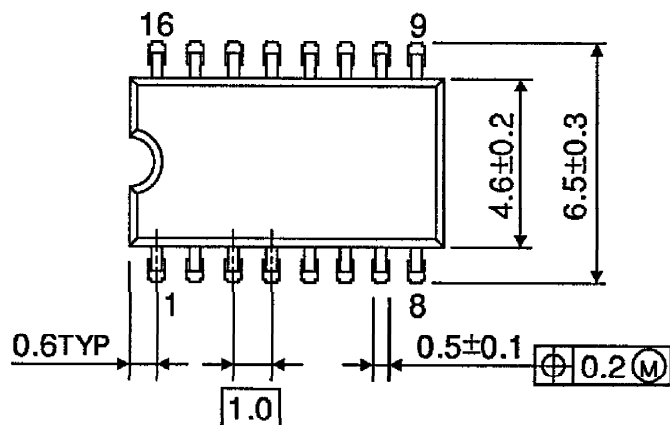


TA7330F



OUTLINE DRAWING
SSOP16-P-225-1.00

Unit : mm



Weight : 0.14g (Typ.)