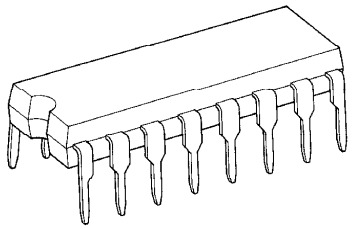
TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA2078P

PRESET EQUALIZER IC

TA2078P is a 3 mode preset equalizer IC.
This IC have built-in one middle boost and two type high / low boost equalizers and flat mode.
These operation mode are contoroled by internal switch.



DIP16-P-300-2.54A

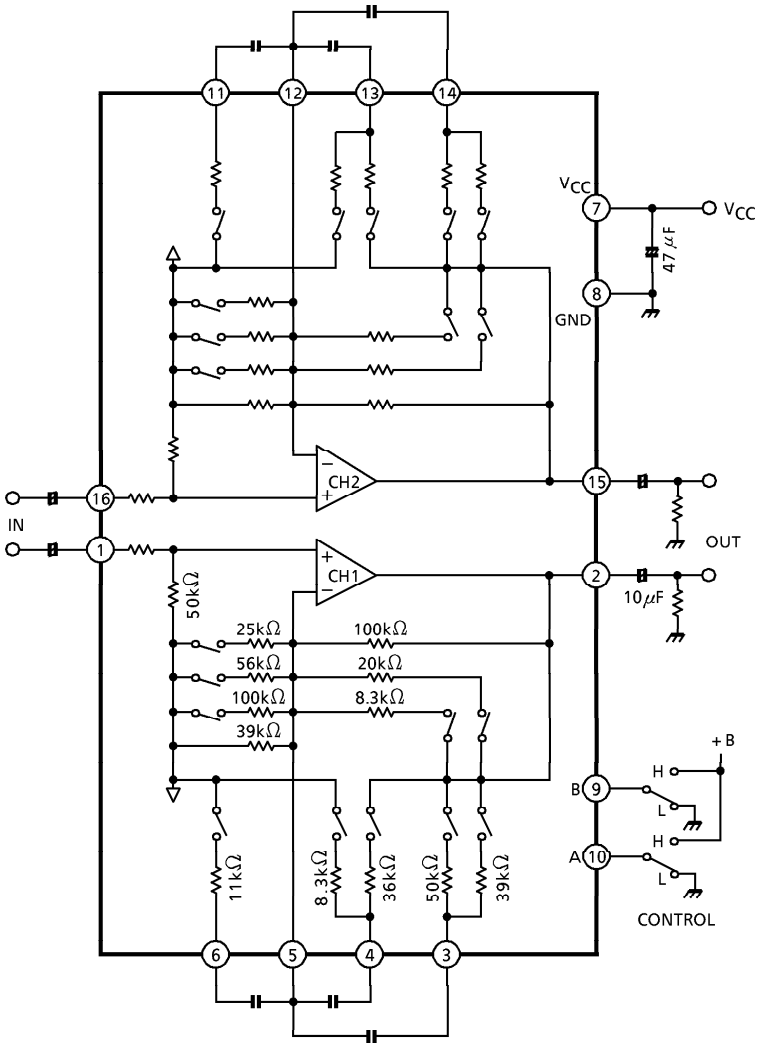
Weight : 1.00g (Typ.)

FEATURES

- Dual channel
- 3 mode preset equalizer
  1) Middle boost
  2) High / Low boost-1
  3) High / Low boost-2
  4) Flat (No equalizing)
- Few external parts
- Two type package

  TA2078P : Dual inline package 16pin
  (Under Development)
- Operating supply voltage range
  : $V_{CC\,(opr)} = 7.5 \sim 14.0V$ (Ta = 25°C)

BLOCK DIAGRAM



MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}	14	V
Power Dissipation	P_D (Note)	750	mW
Operating Temperature	T_{opr}	−25~75	°C
Storage Temperature	T_{stg}	−55~150	°C

(Note) Derated above Ta = 25°C, 6mW / °C for TA2078P.

ELECTRICAL CHARACTERISTICS
(Unless otherwise specified, V_{CC} = 10V, R_g = 620Ω, R_L = 10kΩ, f = 1kHz, Normal Mode, Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Voltage	V_{CC}	—	—	7.5	—	14.0	V
Quiescent Current	I_{CCQ1}	—	NORMAL mode (A = L, B = L)	—	2.5	5.0	mA
	I_{CCQ2}	—	ROCK mode (A = H, B = L)	—	4.2	9.0	
	I_{CCQ3}	—	CLASSIC mode (A = L, B = H)	—	4.6	9.0	
	I_{CCQ4}	—	POP mode (A = H, B = H)	—	4.5	9.0	
Voltage Gain	G_V	—	—	12.0	14.0	16.0	dB
Maximum Output Voltage	V_{om}	—	THD = 1%	2.5	3.0	—	V_{rms}
Total Harmonic Distortion	THD	—	V_{in} = 200mV_{rms}	—	0.01	0.1	%
Ripple Rejection Ratio	R.R.	—	V_{rip} = 300mV_{rms}, f_{rip} = 100Hz	—	−56	—	dB
Cross Talk	C.T.	—	V_{in} = 350mV_{rms}	—	−70	−60	dB
Output Noise Voltage	V_{no}	—	R_g = 620Ω, DIN AUDIO filter	—	20	30	μV_{rms}

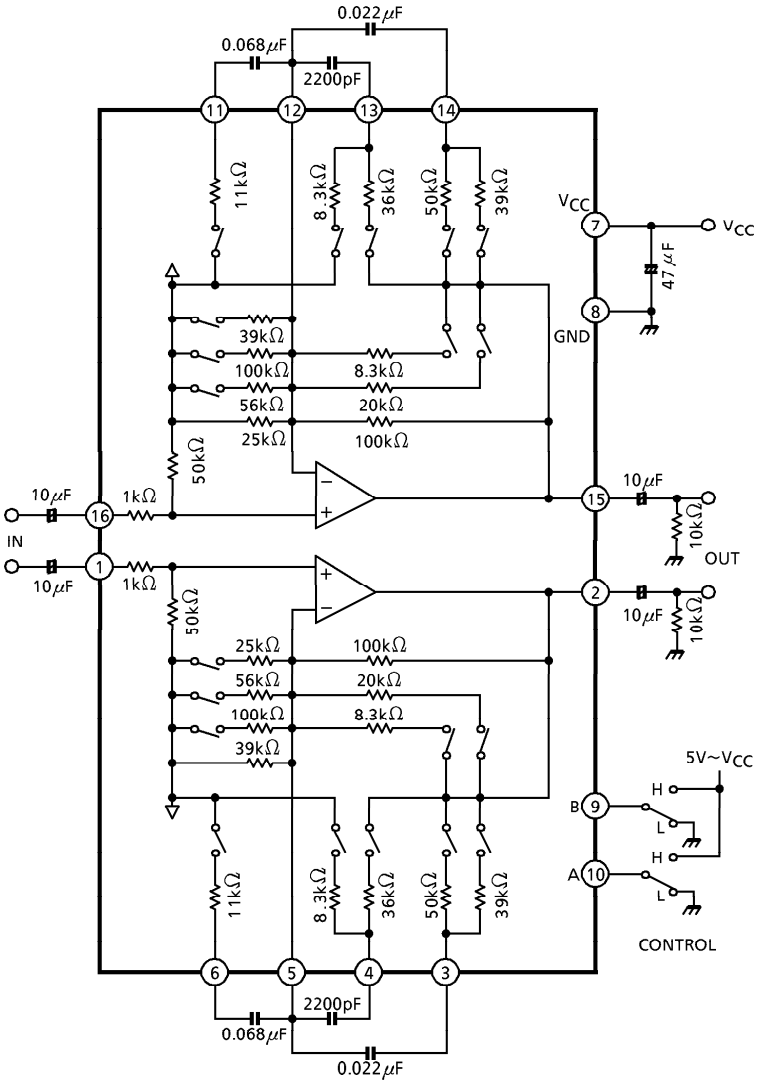
CONTROL SWITCH VOLTAGE

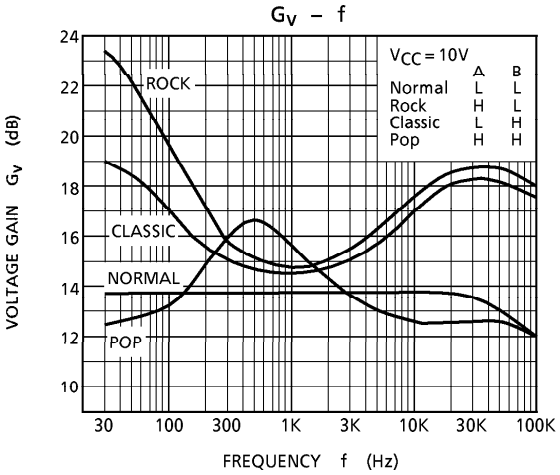
	CONTROL VOLTAGE FOR PIN 10 / 9
"H" Input	2.0V~V_{CC}
"L" Input	0~0.8V or OPEN

OPERATION MODE

	A (10PIN)	B (9PIN)	BOOST FREQUENCY
NORMAL	L	L	Flat (No equalizing)
ROCK	H	L	High / Low boost-1
CLASSIC	L	H	High / Low boost-2
POP	H	H	Mid boost

TEST CIRCUIT

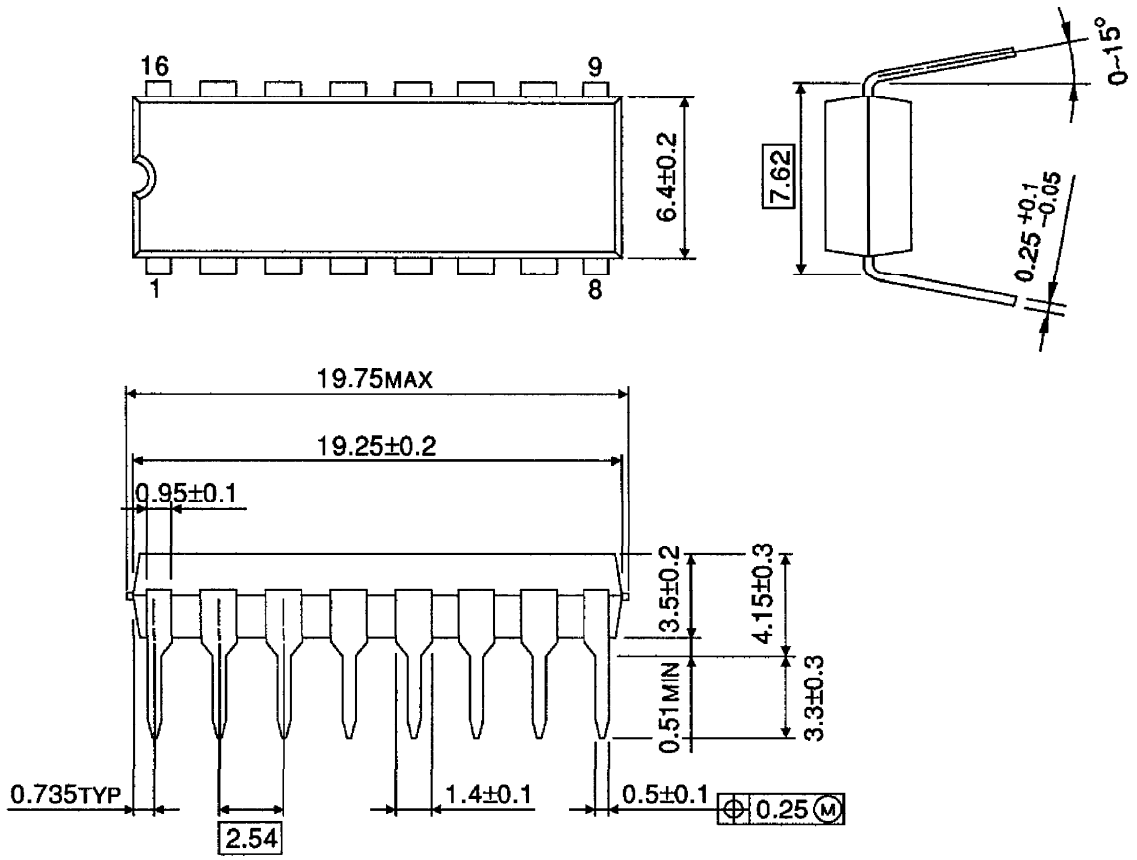



G_V – f
V_{CC} = 10V
A B
Normal L L
Rock H L
Classic L H
Pop H H
ROCK
CLASSIC
NORMAL
POP
VOLTAGE GAIN G_V (dB)
24
22
20
18
16
14
12
10
30
100
300
1K
3K
10K
30K
100K
FREQUENCY f (Hz)

OUTLINE DRAWING

DIP16-P-300-2.54A

Unit : mm



Weight : 1.00g (Typ.)