

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 controled by internal switch.

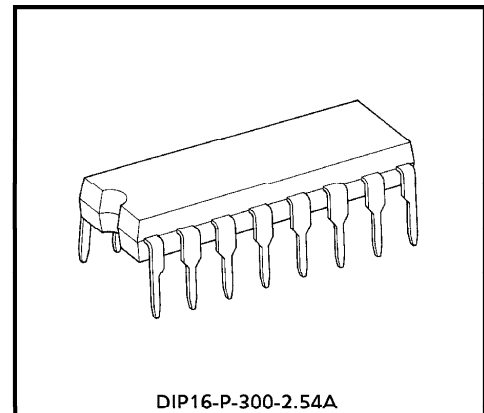
### FEATURES

- 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  
 :  $V_{CC(opr)} = 7.5 \sim 14.0V$  ( $T_a = 25^\circ C$ )

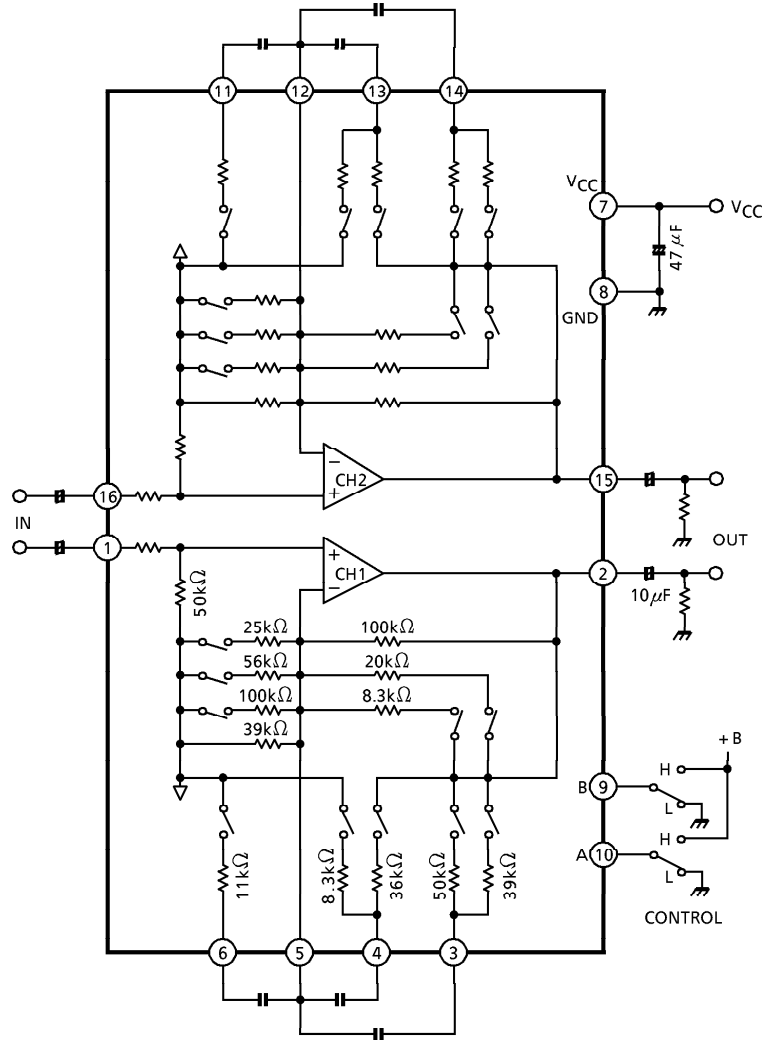


Weight : 1.00g (Typ.)

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BLOCK DIAGRAM



**MAXIMUM RATINGS** (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V <sub>CC</sub>	14	V
Power Dissipation	P <sub>D</sub> (Note)	750	mW
Operating Temperature	T <sub>opr</sub>	- 25~75	°C
Storage Temperature	T <sub>stg</sub>	- 55~150	°C

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

**ELECTRICAL CHARACTERISTICS**

(Unless otherwise specified, V<sub>CC</sub> = 10V, R<sub>G</sub> = 620Ω, R<sub>L</sub> = 10kΩ, f = 1kHz, Normal Mode, Ta = 25°C)

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

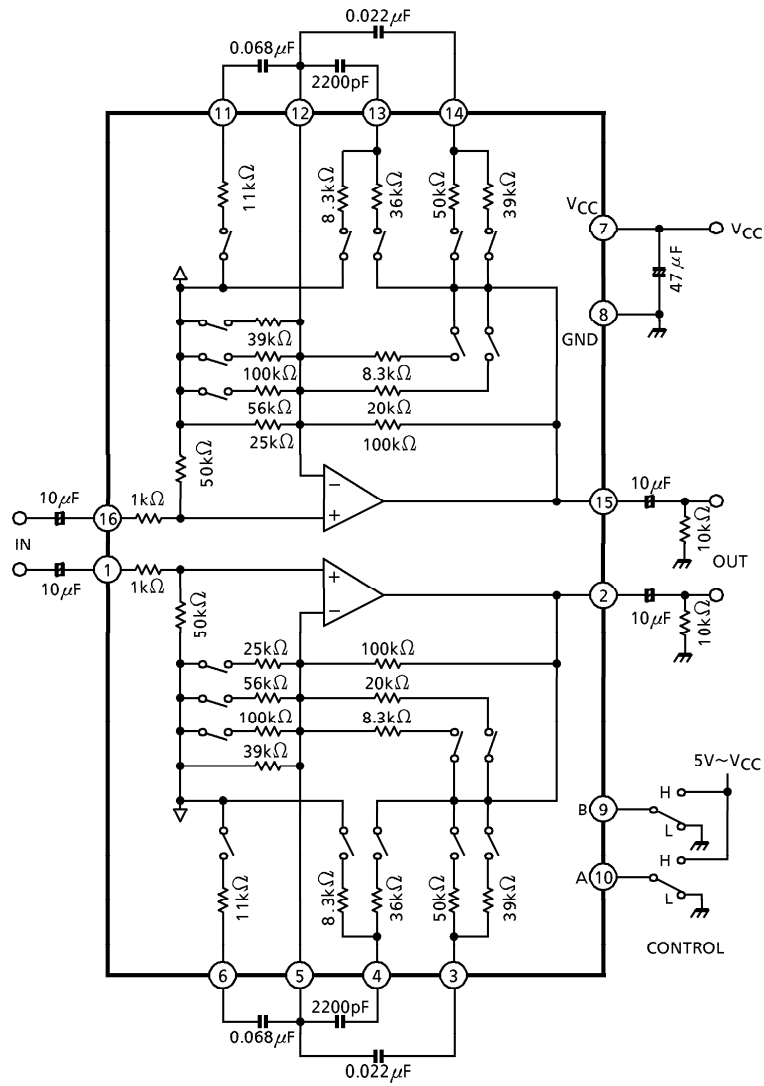
**CONTROL SWITCH VOLTAGE**

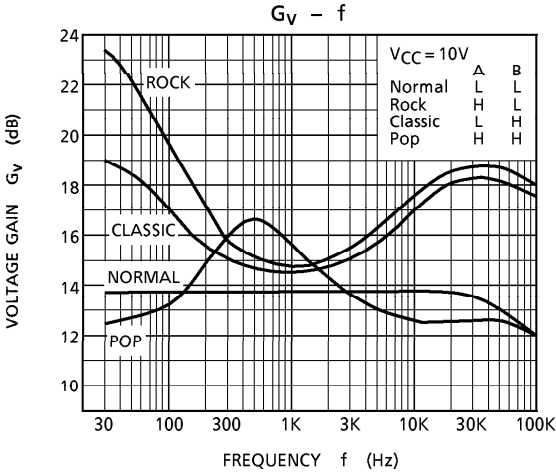
	CONTROL VOLTAGE FOR PIN 10 / 9
"H" Input	2.0V~V <sub>CC</sub>
"L" Input	0~0.8V or OPEN

**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

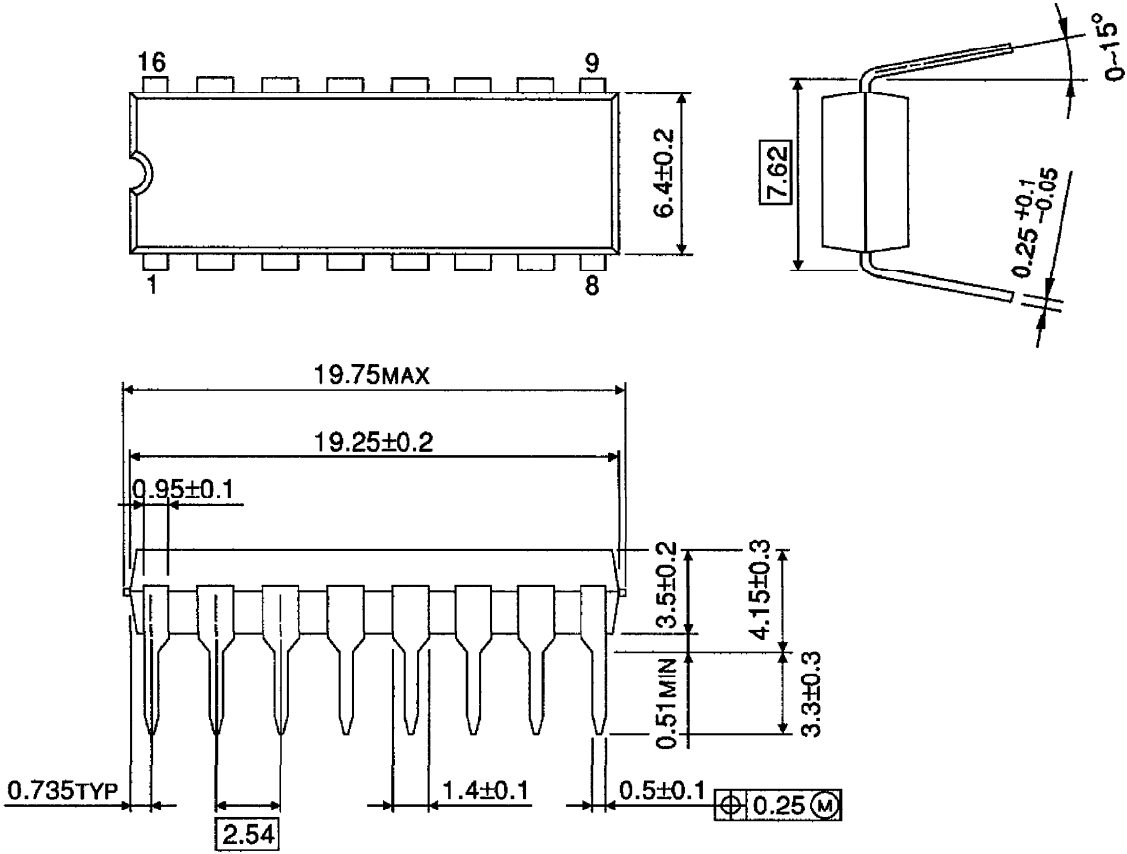
TEST CIRCUIT





OUTLINE DRAWING  
DIP16-P-300-2.54A

Unit : mm



Weight : 1.00g (Typ.)