

PRESET EQUALIZER CIRCUIT

DESCRIPTION

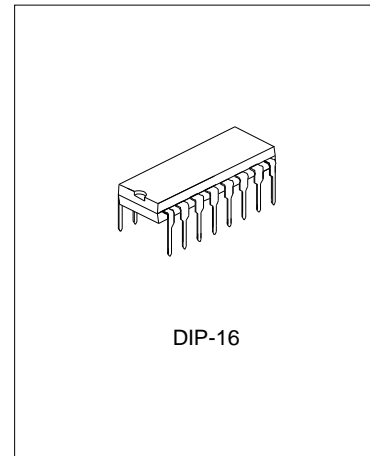
SA2078 is a 3 mode preset equalizer circuit.

This IC has built-in one middle boost and two type high/low boost equalizers and flat mode.

These operation modes are controlled by internal switch.

FEATURES

- * Dual channel
- * 3 mode preset equalizer
- * Few external parts
- * Operating supply voltage range: $V_{CC} (opr) = 7.5 \sim 14V$ ($T_{amb} = 25^{\circ}C$)



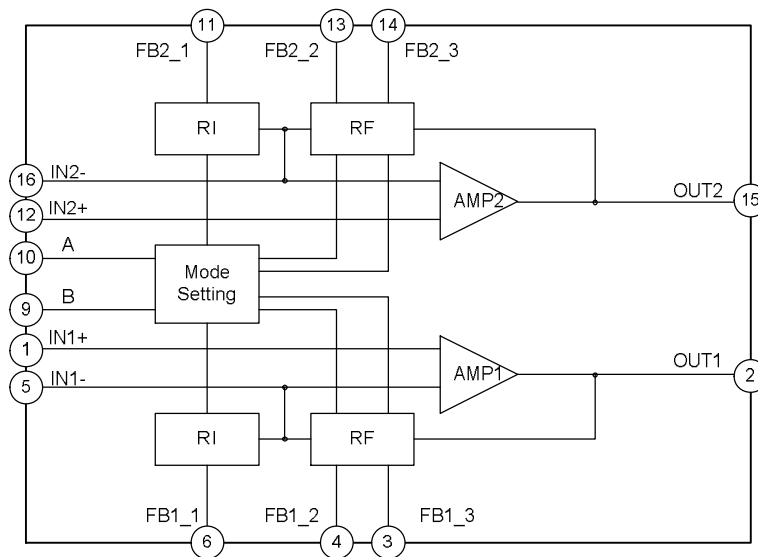
APPLICATIONS

- * Radio/cassette recorders and car audio systems, etc...

ORDERING INFORMATION

Device	Package
SA2078	DIP-16-300-2.54

BLOCK DIAGRAM



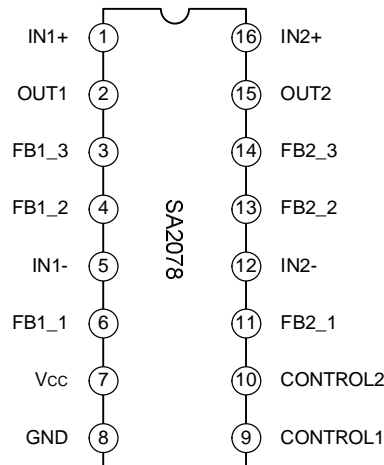
ABSOLUTE MAXIMUM RATING ($T_{amb} = 25^{\circ}C$)

Characteristics	Symbol	Rating	Unit
Supply Voltage	V_{CC}	14	V
Power Dissipation	PD (note)	750	mW
Operating Temperature	T_{opr}	-25~75	$^{\circ}C$
Storage Temperature	T_{stg}	-55~150	$^{\circ}C$

ELECTIVAL DHARACTERISTICS (Unless otherwise specified, $V_{CC}=10V$, $R_g=620\Omega$, $R_L=10K\Omega$, $f=1kHz$, Normal mode, $T_{amb}=25^\circ C$)

Characteristics	Symbol	Test condition	Min.	Typ.	Max.	Unit
Operating Voltage	V _{CC}	--	7.5	--	14.0	V
Quiescent Current	ICCQ1	Normal mode (A=L, B=L)	--	2.5	5.0	mA
	ICCQ2	Rock mode (A=H, B=L)	--	4.2	9.0	
	ICCQ3	Classic mode (A=L, B=H)	--	4.6	9.0	
	ICCQ4	Pop mode (A=H, B=H)	--	4.5	9.0	
Voltage Gain	GV	--	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}

 Notes: "H" input 2.0V~V_{CC}; "L" input 0~0.8V or open

PIN CONFIGURATIONS

PIN DESCRIPTION

Pin no.	Pin name	Description
1	IN1+	Positive input of channel 1
2	OUT1	Output of channel 1
3	FB1_3	Feedback setting 3 of channel 1
4	FB1_2	Feedback setting 2 of channel 1
5	IN1-	Negative input of channel 1
6	FB1_1	Feedback setting 1 of channel 1
7	V _{CC}	V _{CC}
8	GND	GND
9	CONTROL1	Modes setting
10	CONTROL2	
11	FB2_1	Feedback setting 1 of channel 2

(To be continued)

(Continued)

Pin no.	Pin name	Description
12	IN2-	Negative input of channel 2
13	FB2_2	Feedback setting 2 of channel 2
14	FB2_3	Feedback setting 3 of channel 2
15	OUT2	Output of channel 2
16	IN2+	Positive input of channel 2

FUNCTION DESCRIPTION

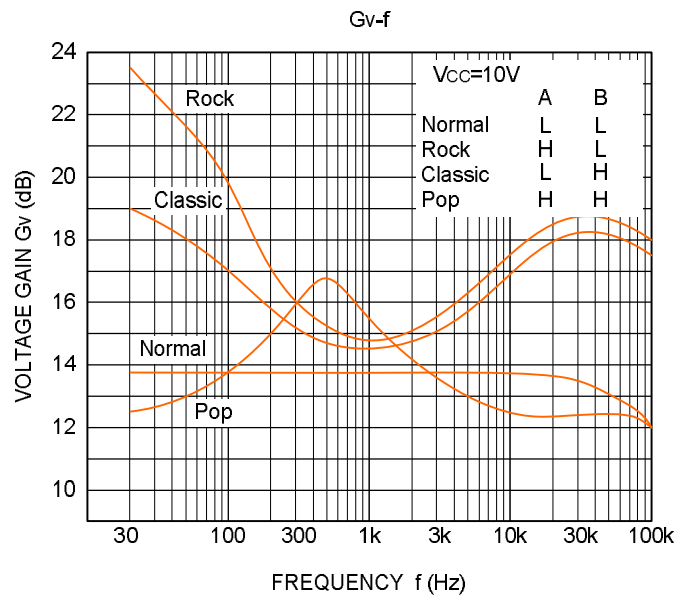
By setting A (pin10) and B (pin9) high (H) or low (L)

Normal: A=L, B= L, Flat (No equalizing)

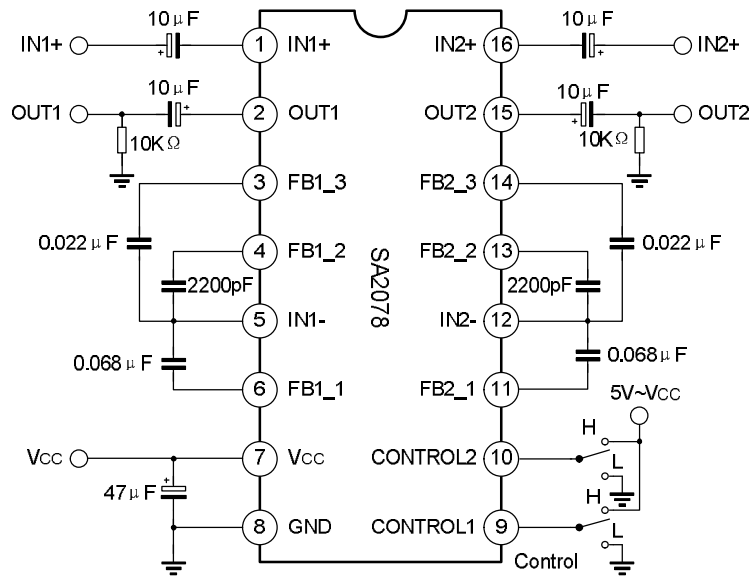
Rock: A=H, B= L, High/low boost-1

Classic: A=L, B= H, High/low boost-2

Pop: A=H, B= H, mid boost



TYPICAL APPLICATION CIRCUIT



PACKAGE OUTLINE

DIP-16-300-2.54

UNIT: mm

