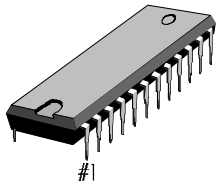
KA22291 PB/REC PRE AMP FOR 2 DECK

INTRODUTION

The KA22291 is a monolithic integrated circuit consisting of dual input playback amplifier and dual input record amplifier for double deck or auto-reverse operation
It is suitable for 6V-9V double deck or auto-reverse cassette applications.

24-SDIP-300



FEATURES

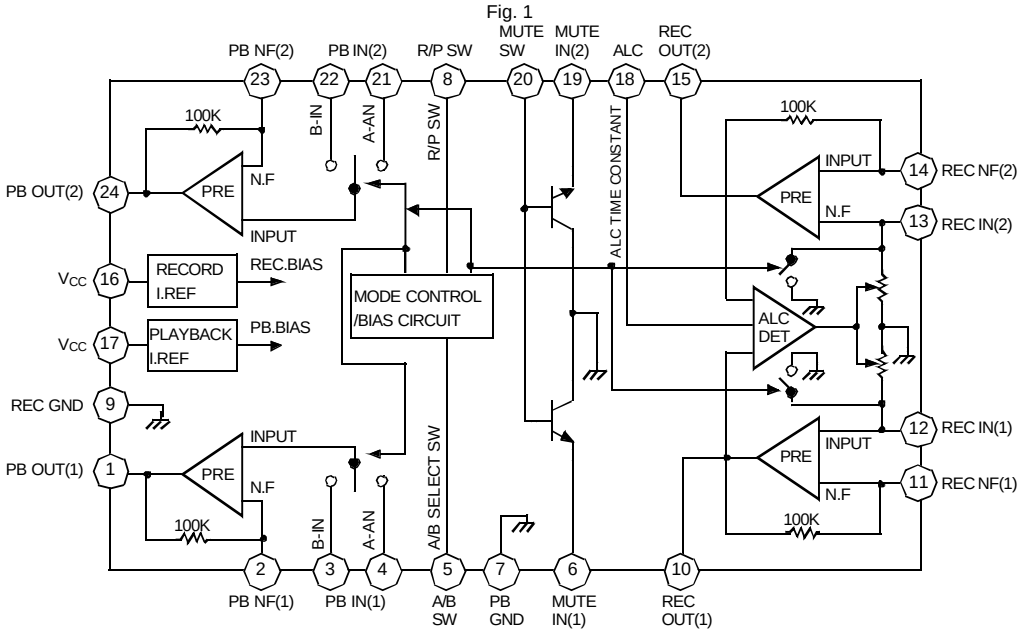
- Dual input two-channel playback amplifier
- Two-channel record amplifier
- Built in ALC and Muting circuit
- PB/REC and playback input select switch included
- Power ON ALC discharge circuit included
- Operating supply voltage: V_{cc} = 4V ~ 12V
- REC/PB power on quick start circuit
- Few external part required.

ORDERING INFORMATION

Device	Package	Operating emperature
KA22291	24-SDIP-300	-25°C~ +75°C

BLOCK DIAGRAM

Fig. 1



SAMSUNG ELECTRONICS

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Value	Unit
Supply Voltage	V_{CC}	12	V
Power Dissipation	P_D	1000	mW
Operating Temperature	T_{OPR}	-25 ~ +75	°C
Storage Temperature	T_{STG}	-55 ~ + 125	°C

ELECTRICAL CHARACTERISTICS

(T_a = 25°C, V_{CC} = 9V, f = 1KHz, unless otherwise specified)

Characteristic			Symbol	Test Conditions	Min	Typ	Max	Unit
Circuit Current			I_{CCQ}	V_I = 0, REC MODE		10	15	mA
PLAYBACK	Open Loop Voltage Gain		G_{VO}	V_I = -80dBm	60	72		dB
	Output Voltage		V_{O1}	THD = 1%, NAB	0.5	1.5		V
	Total Harmonic Distortion		THD_1	V_O = dBM, NAB		0.04	0.2	%
	Cross Talk	CH to CH	CT_1	V_O = dBM, NAB		-75	-55	dB
		Ain to Bin	CT_2	V_O = dBM, NAB		-65	-50	dB
	Equivalent Input Noise Voltage		V_{NI}	Fiter: 20Hz ~ 20KHz R_G = 2.2K, V_I = 0		1.0	2.2	μV
RECORD	Close Loop Voltage Gain		G_{VC}	V_I = 68dBm, ALC off	57.5	60	62.5	dB
	Output Voltage		V_{O2}	THD = 1%, ALC off	1.2	1.8		V
	Total Harmonic Distortion		THD_2	V_I = 0dBm, ALC off		0.35	1	%
	ALC Output Voltage		$V_{O(ALC)}$	V_I = -20dBm	0.75	0.95	1.25	V
	ALC THD		THD_{ALC}	V_I = -20dBm		0.25	1.0	%
	ALC Range		ΔV_{ALC}	V_I = -55dBm, +3dB UP	40	50		dB
	Cross Tlk (ALC)		CT_3	V_I = -20dBm		-55	-35	dB
Record TO Playback Cross Talk			CT_4	REC input = GND PLAY output = 0dBm		-60	-40	dB
Muting Range			MR	V_I = -20dBm		-55	-40	dB

TEST CIRCUIT

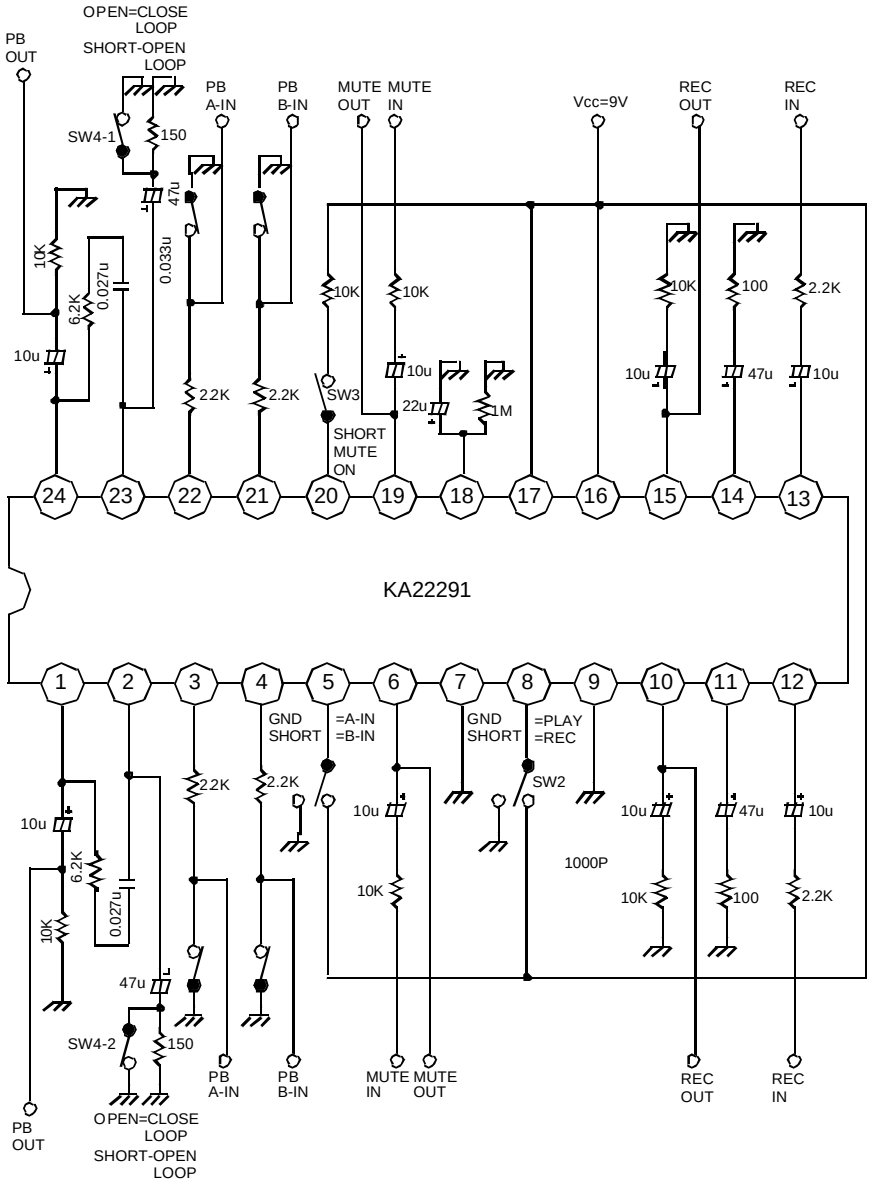


Fig. 2

These specifications are subject to change without notice.

APPLICATION INFORMATION

1. R/P SWITCH

Apply R/P input voltage at PIN 8.
PLAY: 0V (GND)
REC: 4.5V ~ 12V (Don't apply 13V above).
Only valid A/B input select in playback mode.
In record mode, the playback A-input was available and the ALC was turned on by record bias.

A. RECORD MODE SCHEMATIC

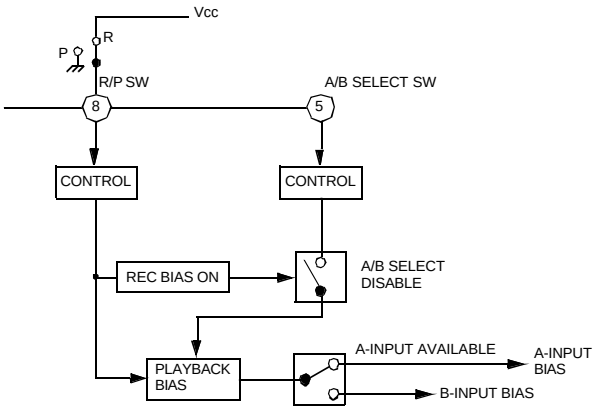


Fig. 3

B. PLAYBACK MODE SCHEMATIC

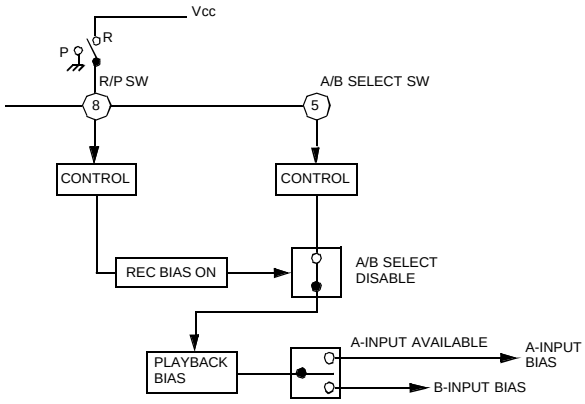


Fig. 4

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2. PLAYBACK A/B INPUT SELECT SWITCH (only playback mode)

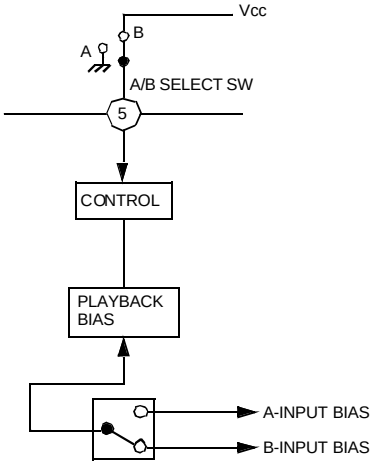
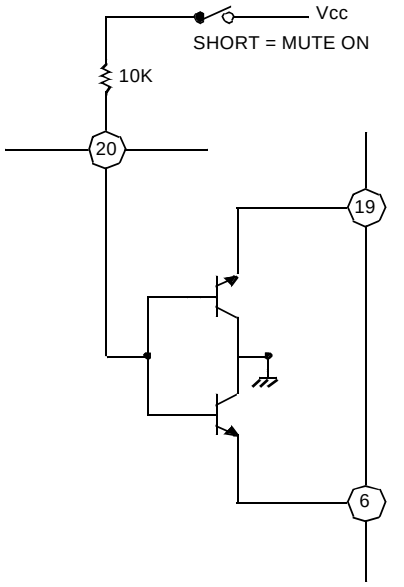


Fig. 5

3. MUTE SWITCH



¡Ù THIS CIRCUIT IS OPERATED ON
REVERSE SATURATION MODE

Fig. 6

¡Ù These specifications are subject to change without notice.