

# AN3316K

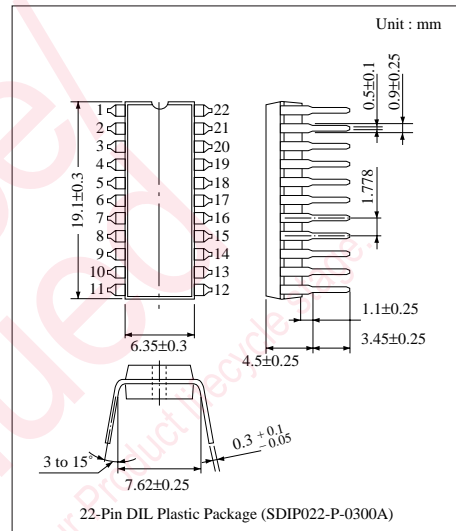
## Recording/Playback Amplifier IC for VCR Hi-Fi Audio

### ■ Overview

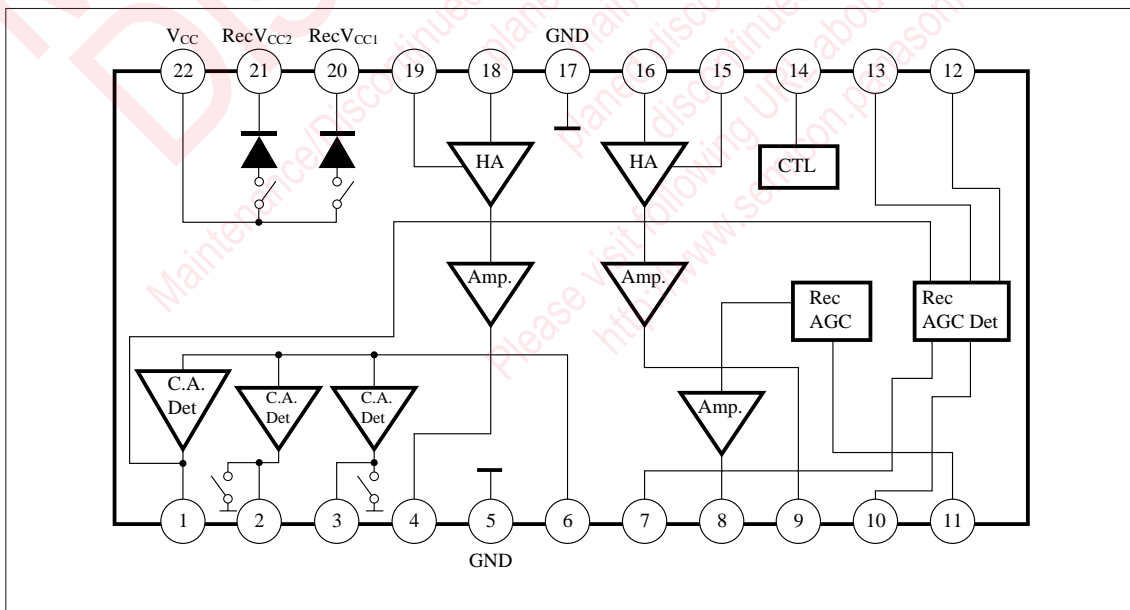
The AN3316K is an IC developed as a recording/playback amplifier for VCR Hi-Fi audio. In combination with the AN3970 and AN3976, it can configure the system.

### ■ Features

- Operating supply voltage : 5V(typ.).
- Adjustment-free recording current by built-in Rec AGC.
- 2-channel output through playback amplifier.



### ■ Block Diagram



### ■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	6	V
Power dissipation	P <sub>D</sub>	600	mW
Operating ambient temperature	T <sub>opr</sub>	-20 to +70	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

### ■ Recommended Operating Range (Ta=25°C)

Parameter	Symbol	Range
Operating supply voltage range	V <sub>CC</sub>	4.5V to 5.5V

### ■ Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	min	typ	max	Unit
Rec circuit current	I <sub>REC</sub>	Rec Mode, V <sub>CC</sub> =5V	—	—	85	mA
Rec AGC level	I <sub>AGC</sub>	Rec Mode, V <sub>CC</sub> =5V	22.7	—	32.1	mA <sub>PP</sub>
Rec AGC control characteristic	ΔI <sub>AGC</sub>	Rec Mode, V <sub>CC</sub> =5V	-1	—	1	dB
Recording current 2nd harmonics distortion CH1	D <sub>R2f-1</sub>	Rec Mode, V <sub>CC</sub> =5V	—	—	-35	dB
Recording current 2nd harmonics distortion CH2	D <sub>R2f-2</sub>	Rec Mode, V <sub>CC</sub> =5V	—	—	-35	dB
Rec Mode hold voltage	V <sub>S REC</sub>	V <sub>CC</sub> =5V	3.6	—	5	V
Rec Mute hold voltage	V <sub>S Mute</sub>	V <sub>CC</sub> =5V	2	—	2.6	V
PB circuit current	I <sub>PB</sub>	PB Mode, V <sub>CC</sub> =5V	—	—	25	mA
PB CH1 gain	G <sub>9-16</sub>	PB Mode, V <sub>CC</sub> =5V	53	—	63	dB
PB CH3 gain	G <sub>4-18</sub>	PB Mode, V <sub>CC</sub> =5V	53	—	63	dB
Inter-PB CH gain ratio	G <sub>9-16</sub> - G <sub>4-18</sub>	PB Mode, V <sub>CC</sub> =5V	-1	—	1	dB
PB input-conversion noise CH1	N <sub>IN9-16</sub>	PB Mode, V <sub>CC</sub> =5V	—	—	1	μVrms
PB input-conversion noise CH2	N <sub>IN4-18</sub>	PB Mode, V <sub>CC</sub> =5V	—	—	1	μVrms
PB crosstalk CH1 to CH2	CT1	PB Mode, V <sub>CC</sub> =5V	—	—	-30	dB
PB crosstalk CH2 to CH1	CT2	PB Mode, V <sub>CC</sub> =5V	—	—	-30	dB
PB CH1 output 2nd harmonics distortion	D <sub>PB2f-1</sub>	PB Mode, V <sub>CC</sub> =5V	—	—	-35	dB
PB CH2 output 2nd harmonics distortion	D <sub>PB2f-2</sub>	PB Mode, V <sub>CC</sub> =5V	—	—	-35	dB
PB mode hold voltage	V <sub>SPB</sub>	V <sub>CC</sub> =5V	0	—	1	V

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