

**DUAL LOW VOLTAGE POWER AMP**

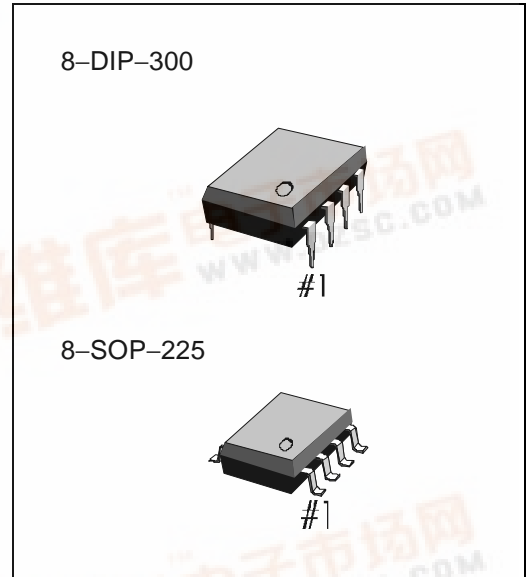
**S1A2209A01**

**INTRODUCTION**

The S1A2209A01 is a monolithic integrated audio amplifier in an 8-pin plastic dualinline package. It is designed for use in portable cassette tape players and radios.

**FEATURES**

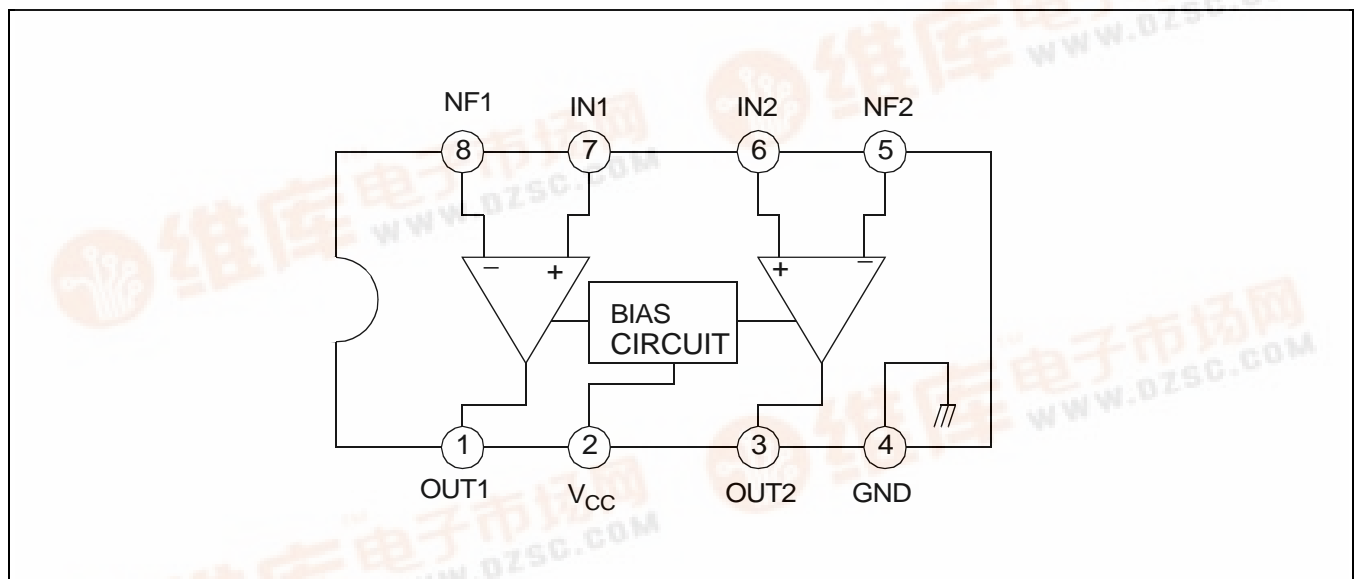
- Wide range of operating supply voltage:  
 $V_{CC} = 1.8V - 9V$
- Low crossover distortion
- Low quiescent circuit current
- Bridge/stereo configuration



**ORDERING INFORMATION**

Device	Package	Operating Temperature
S1A2209A01-D0B0	8-DIP-300	-20°C — +70°C
S1A2209A01-S0B0	8-SOP-225	

**BLOCK DIAGRAM**



**ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)**

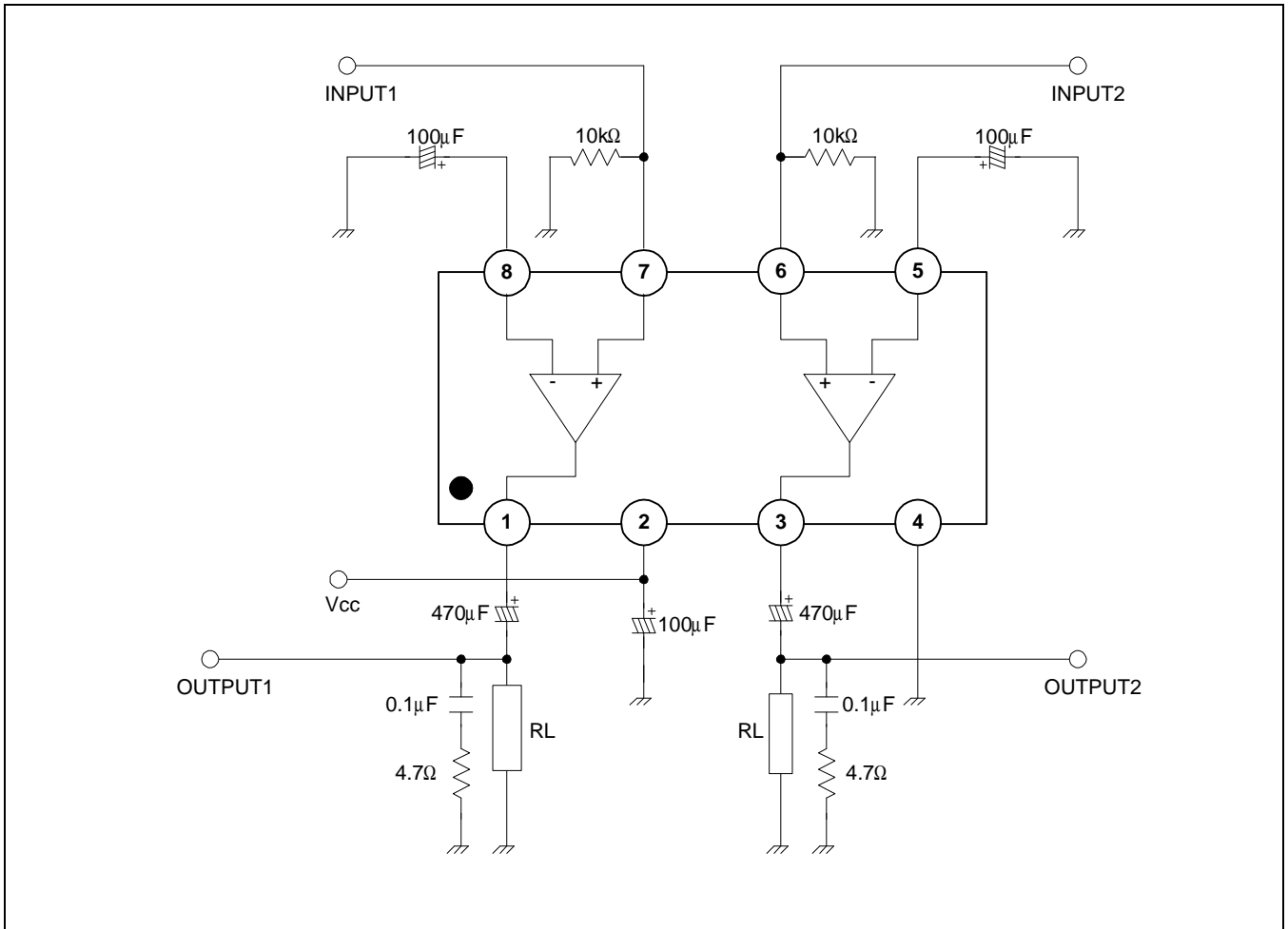
Characteristic	Symbol	Value	Unit
Supply Voltage	V <sub>CC</sub>	15	V
Output Peak Current	I <sub>PK</sub>	1	A
Power Dissipation	P <sub>D</sub>	at T <sub>AMB</sub> = 50°C 1.0	W
		at T <sub>CASE</sub> = 50°C 1.4	
Operating Temperature	T <sub>OPR</sub>	- 20 — + 70	°C
Storage Temperature	T <sub>STG</sub>	- 40 — +150	°C

**ELECTRICAL CHARACTERISTICS**(Ta = 25°C, V<sub>CC</sub> = 6V, f = 1kHz, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min.	Typ.	Max.	Unit	
Operating Voltage	V <sub>CC</sub>	—	1.8	—	9	V	
Quiescent Circuit Current	I <sub>CCQ</sub>	V <sub>I</sub> = 0	—	6	—	mA	
Closed Loop Voltage Gain	G <sub>VC</sub>	Stereo	—	40	—	dB	
		Bridge	—	40	—	dB	
Channel Balance	C <sub>B</sub>	Stereo	- 1	0	1	dB	
Output Power	P <sub>O</sub>	Stereo	V <sub>CC</sub> = 6V, R <sub>L</sub> = 4Ω, THD=10%	0.4	0.65	—	W
			V <sub>CC</sub> = 3V, R <sub>L</sub> = 4Ω, THD=10%	—	0.11	—	W
		Bridge	V <sub>CC</sub> = 6V, R <sub>L</sub> = 8Ω, THD=10%	0.9	1.35	—	W
			V <sub>CC</sub> = 3V, R <sub>L</sub> = 4Ω, THD=10%	—	0.35	—	W
Total Harmonic Distortion	THD	Stereo, R <sub>L</sub> = 8Ω, P <sub>O</sub> = 0.2W	—	0.3	—	%	
		Bridge, R <sub>L</sub> = 8Ω, P <sub>O</sub> = 0.5W	—	0.2	—	%	
Ripple Rejection Ratio	RR	Stereo, f = 100Hz, C <sub>3</sub> = 100uF	24	30	—	dB	
Output Noise Voltage	V <sub>NO</sub>	Stereo, BW (-3dB) = 20Hz — 20kHz	—	0.5	2.0	mV	
Cross Talk	CT	Stereo, f = 1kHz	—	50	—	dB	
Input Resistance	R <sub>I</sub>	—	100	—	—	kΩ	

TEST CIRCUIT 1

STEREO



TEST CIRCUIT 2

BRIDGE

