

4.6W DUAL AUDIO POWER AMPLIFIER

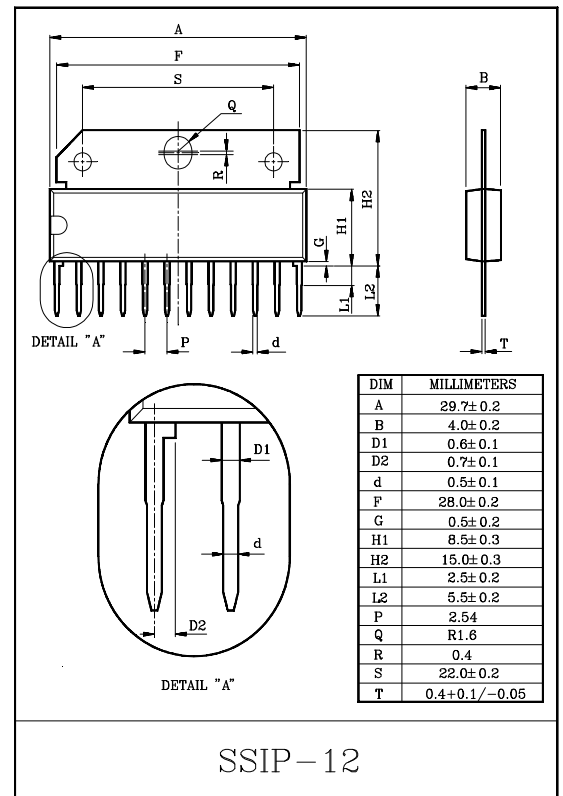
KIA6283K is an audio power IC with built-in two channels developed for portable radio cassette tape recorder.

Because of the parts reduction and SIP (Single In line Package), space merit is remarkable.

Thermal shut down protection circuit is built in.

FEATURES

- High Power
 $P_{OUT}=2.5W/CH$ (Typ.)
 $: (V_{CC}=9V, R_L=4\Omega, f=1kHz, THD=10\%)$
 $P_{OUT}=4.6W/CH$ (Typ.)
 $: (V_{CC}=12V, R_L=4\Omega, f=1kHz, THD=10\%)$
- Low popping noise at power ON
- Small Quiescent Current
 $: I_{CCQ}=19mA$ (Typ.) ($V_{CC}=9V, V_{IN}=0$)
- Soft Clip
- Built-in thermal shut down protection circuit
- Best for supply voltage 9V, 12V
- Operation supply voltage range : $V_{CC}=6\sim 15V$



MAXIMUM RATINGS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}	20	V
Output Current (Peak/CH)	$I_{O(peak)}$	2.5	A
Power Dissipation	P_D	12.5	W
Operating Temperature	T_{opr}	-20~75	°C
Storage Temperature	T_{stg}	-55~150	°C

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ELECTRICAL CHARACTERISTICS

(Unless otherwise specified, $V_{CC}=9V$, $f=1kHz$, $R_g=600\Omega$, $R_L=4\Omega$, $T_a=25^\circ C$)

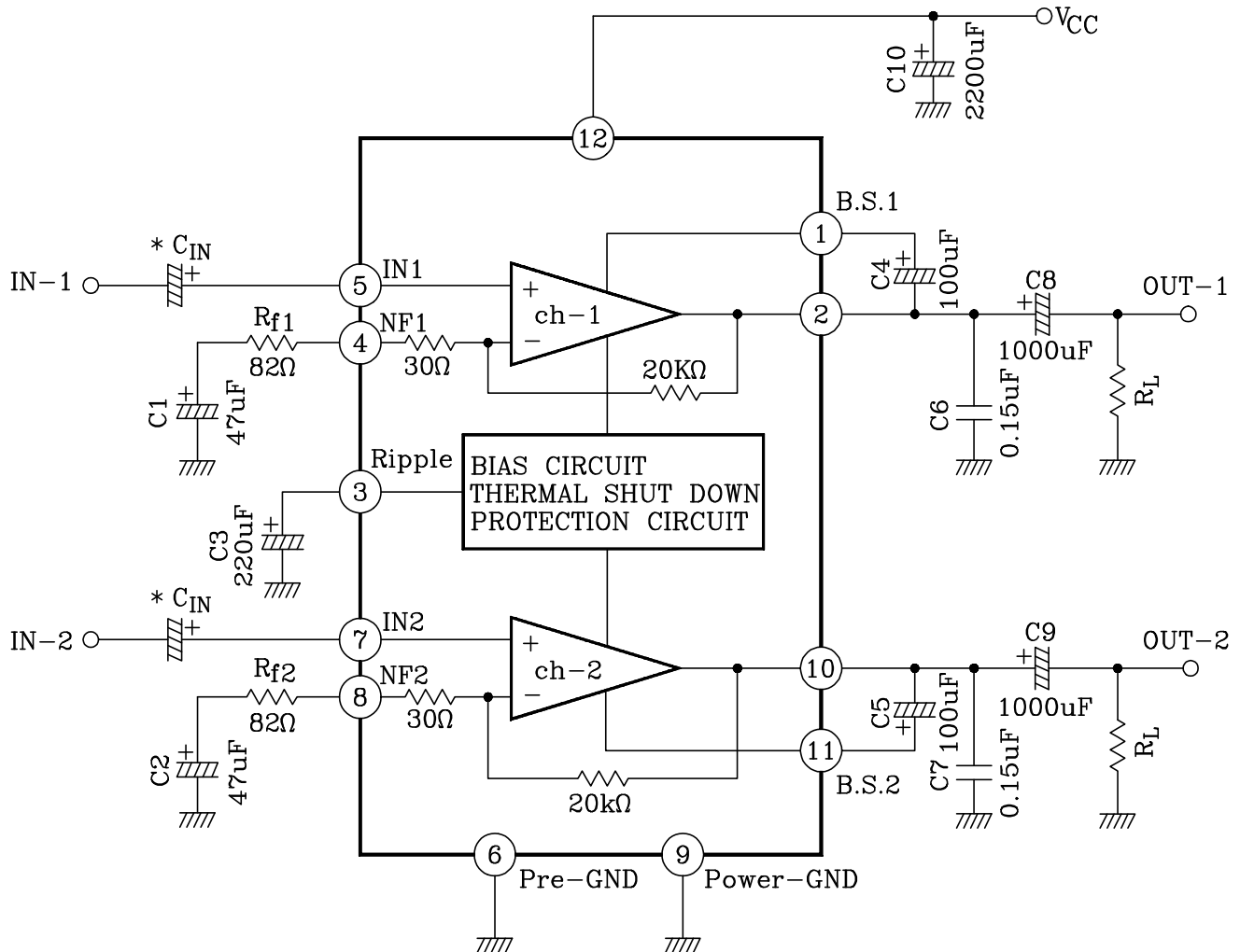
CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Quiescent Current	I_{CCQ}	—	$V_{IN}=0$	—	19	45	mA
Output Power	$P_{OUT(1)}$	—	THD=10%	2.0	2.5	—	W
	$P_{OUT(2)}$	—	THD=10%, $V_{CC}=12V$	—	4.6	—	
Total Harmonic Distortion	THD	—	$P_{OUT}=1W/CH$	—	0.2	1.0	%
Voltage Gain	$G_V(1)$	—	$R_f=82\Omega$, $V_{OUT}=0dBm$	43	45	47	dB
	$G_V(2)$	—	$R_f=0$, $V_{OUT}=0dBm$	—	56	—	
Input Resistance	R_{IN}	—	—	—	30	—	k Ω
Output Noise Voltage	V_{NO}	—	$R_g=10k\Omega$, $BW=20Hz \sim 20kHz$	—	0.3	1.0	mV _{rms}
Ripple Rejection Ratio	R.R	—	$R_g=600\Omega$, $V_{RIP}=0.2V_{rms}$ $f_{RIP}=100Hz$	—	54	—	dB
Cross Talk	C.T	—	$R_g=600\Omega$, Amp1 $\leftrightarrow$ 2 $V_{OUT}=0dBm$, $f=1kHz$	—	60	—	dB
Input Offset Voltage	V_5, V_7	—	—	—	20	60	mV

TYPICAL DC VOLTAGE OF EACH TERMINAL ($V_{CC}=9V$, $T_a=25^\circ C$)

TERMINAL NO.	1	2	3	4	5	6	7	8	9	10	11	12
DC VOTAGE (V)	8.2	4.5	8.9	0.6	0.01	GND	0.01	0.6	GND	4.5	8.2	V_{CC}

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TEST CIRCUIT & BLOCK DIAGRAM



* This IC can be used without coupling capacitor (C_{IN}). If volume slide noise occurred by input offset voltage is undesirable, it needs to use the capacitor (C_{IN}).

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STANDARD PRINT PATTERN

