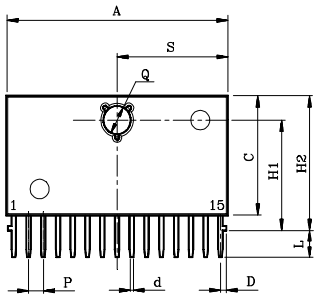
7.3W DUAL AUDIO POWER IC

The KIA6248K is dual audio power amplifier for application.

It contains various kind of protectors and the function of stand-by switch.



DIM	MILLIMETERS
A	30.0±0.2
B	3.0±0.3
C	15.7±0.2
D	0.8±0.1
d	0.6±0.1
H1	14.5±0.3
H2	17.7±0.3
L	3.5±0.3
P	2.0
Q	3.7±0.2
S	15.0±0.2
T	0.6+0.1/−0.05

HSIP−15

FEATURES

- Output Power
  : $P_{OUT(1)}$=7.3W(Typ.)
  (V_{CC}=13.2V, R_L=2Ω, f=1kHz, THD=10%)
  : $P_{OUT(2)}$=6.4W(Typ.)
  (V_{CC}=14.4V, R_L=4Ω, f=1kHz, THD=10%)
  : $P_{OUT(3)}$=5.3W(Typ.)
  (V_{CC}=13.2V, R_L=4Ω, f=1kHz, THD=10%)
- Total Harmonic Distortion
  : THD=0.1%(Typ.)
  (V_{CC}=13.2V, R_L=4Ω, f=1kHz, P_{OUT}=1W)
- Built-in Stand-by Switch Function
  : ISTBY=1μA(Typ.)
  (With ⑨ pin set at High, power is turned ON.)
- Built-in Various Protection Circuits
  : OVER Voltage, Thermal Shut Down
  Out to GND, out to V_{CC} Short
- Built-in Junction Temperature Detection Function
  (Pin ① : 10mW/℃)
- Operation supply voltage range : V_{CC}=6~18V.

MAXIMUM RATINGS (Ta=25℃)

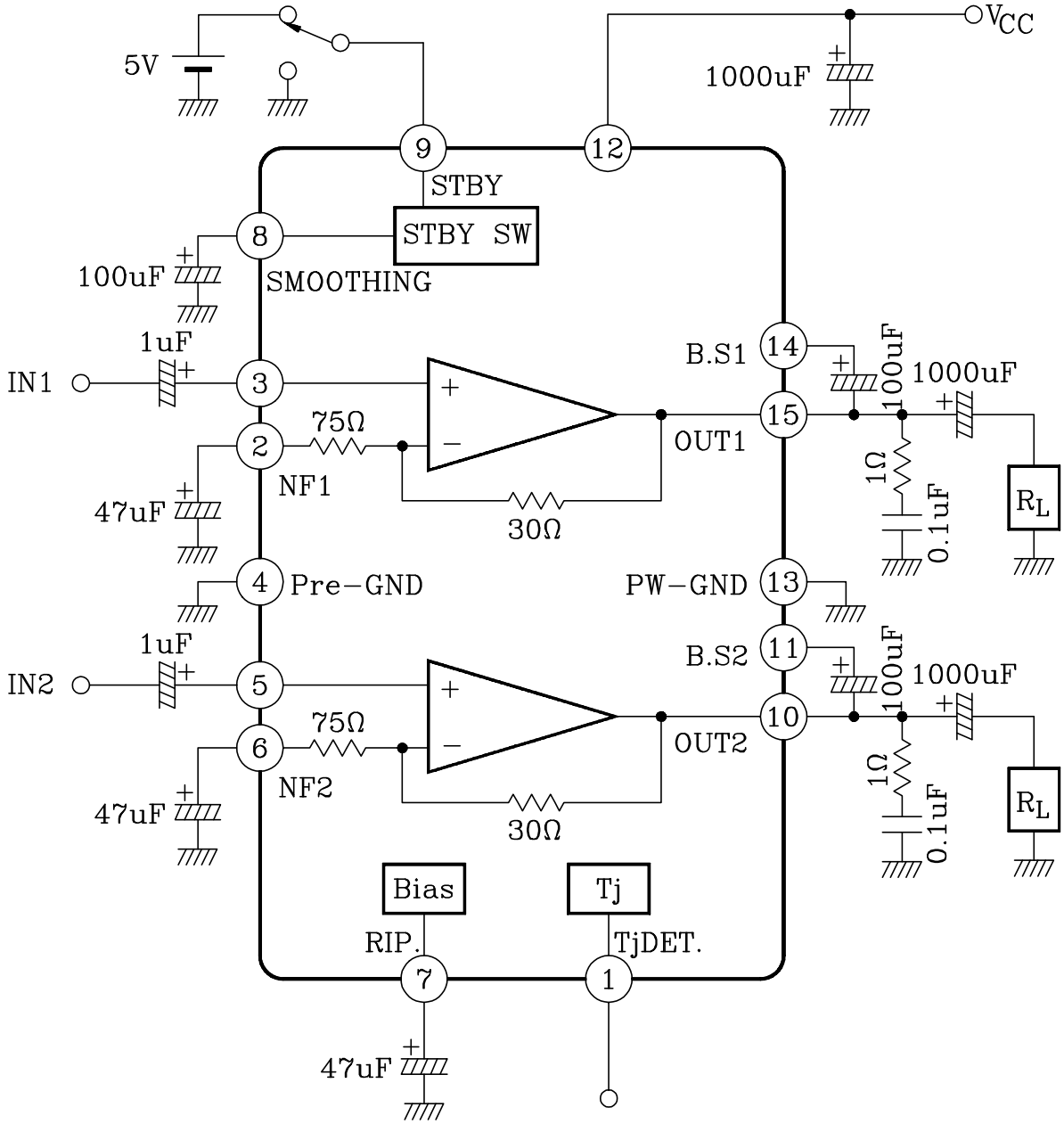
CHARACTERISTIC	SYMBOL	RATING	UNIT
Peak Supply Voltage (0.2 sec)	V_{CC} surge	50	V
DC Supply Voltage	V_{CC} DC	20	V
Operating Supply Voltage	V_{CC} opr	18	V
Output Current (Peak)	$I_{O(peak)}$	4.5	A
Power Dissipation	P_D	15	W
Operating Temperature	T_{opr}	-30~85	℃
Storage Temperature	T_{stg}	-55~150	℃

ELECTRICAL CHARACTERISTICS

(Unless otherwise specified, V_{CC}=13.2V, f=1kHz, Rg=600Ω, R_L=4Ω, Ta=25℃)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Quiescent Current	I_{CCQ}	V_{IN}=0	-	60	150	mA
Output Power	P_{OUT} (1)	R_L=2Ω, THD=10%	-	7.3	-	W
	P_{OUT} (2)	Vcc=14.4V, THD=10%	-	6.4	-	
	P_{OUT} (3)	THD=10%	4.8	5.3	-	
Total Harmonic Distortion	THD	P_{OUT}=1W	-	0.1	0.5	%
Voltage Gain	G_V	V_{OUT}=0dBm	50	52	54	dB
Voltage Gain Ratio	ΔG_V	V_{OUT}=0dBm	-1	0	1	dB
Output Noise voltage	V_{NO}	Rg=0Ω, BW=20Hz~20kHz	-	0.20	0.7	mV_{rms}
Ripple Rejection Ratio	R.R	Rg=600Ω, V_{RIP}=0dBm, f_{RIP}=100Hz	40	57	-	dB
Cross Talk	C.T	Rg=600Ω, V_{OUT}=0dBm	-	65	-	dB
Input Resistance	R_{IN}	-	-	30	-	kΩ
Stand-By Current	I_{STBY}	Pin ⑨ : GND	-	1	10	μA

BLOCK DIAGRAM / TEST CIRCUIT



APPLICATION CIRCUIT (BTL MODE)