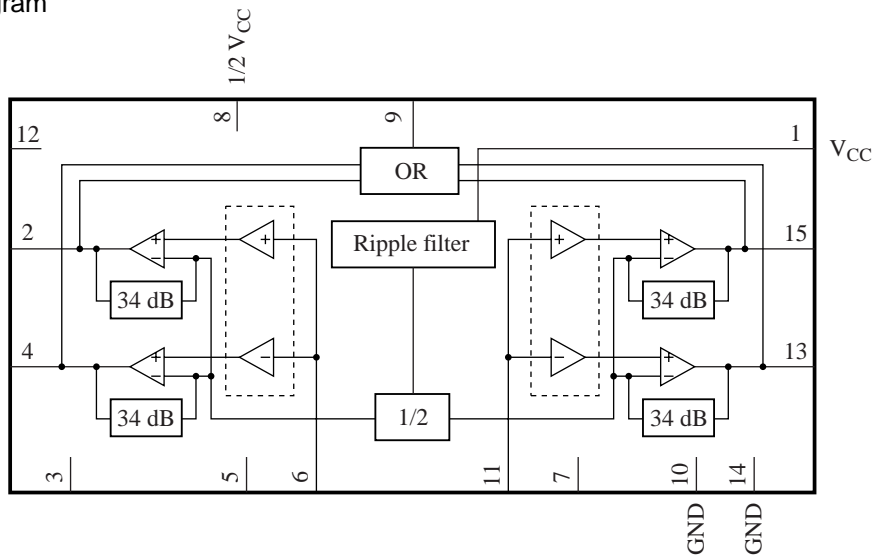


■ Block Diagram



■ Pin Descriptions

Pin No.	Description	Pin No.	Description
1	Power supply	9	OR output
2	Ch.1 output (-)	10	GND
3	Grounding (output ch.1)	11	Ch.2 input
4	Ch.1 output (+)	12	N.C.
5	Stand-by	13	Ch.2 output (+)
6	Ch.1 input	14	Grounding (output ch.2)
7	Muting	15	Ch.2 output (-)
8	Middle point ($1/2 V_{CC}$)	16	N.C. (for the AN7194K only)

■ Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	26	V
Supply current	I_{CC}	9.0	A
Power dissipation *2	P_D	AN7194K	37.5
		AN7194Z	68.2
Operating ambient temperature *1	T_{opr}	-25 to +75	°C
Storage temperature *1	T_{stg}	-55 to +150	°C

Note) *1 : All items are at $T_a = 25^\circ\text{C}$, except for the operating ambient temperature and storage temperature.

*2 : The value when $R_{th(j-c)} = 1.1^\circ\text{C/W}$, and $T_a = 75^\circ\text{C}$

■ Recommended Operating Range

Parameter	Symbol	Range	Unit
Supply voltage	V_{CC}	6.0 to 24.0	V

■ Electrical Characteristics at $V_{CC} = 12\text{ V}$, $f = 1\text{ kHz}$, $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Quiescent current	I_{CQ}	$V_{IN} = 0\text{ mV}$, $R_L = 6\ \Omega$	—	150	250	mA
Standby current	I_{STB}	$V_{IN} = 0\text{ mV}$, $R_L = 6\ \Omega$	—	1	10	μA
Output noise voltage ^{*1}	V_{NO}	$R_G = 10\text{ k}\Omega$, $R_L = 6\ \Omega$	—	0.22	0.5	mV[rms]
Voltage gain	G_V	$V_{IN} = 24.5\text{ mV}$, $R_L = 6\ \Omega$	38	40	42	dB
Total harmonics distortion	THD	$V_{IN} = 24.5\text{ mV}$, $R_L = 6\ \Omega$	—	0.2	0.6	%
Maximum output power 1	P_{O1}	THD = 10%, $R_L = 6\ \Omega$	8	10	—	W
Maximum output power 2 ^{*2}	P_{O2}	THD = 10%, $R_L = 6\ \Omega$	30	44	—	W
Ripple rejection ratio ^{*1}	RR	$R_L = 6\ \Omega$, $R_G = 10\text{ k}\Omega$ $V_R = 1\text{ V[rms]}$, $f_R = 1\text{ kHz}$	45	60	—	dB
Channel balance ^{*1}	CB	$V_{IN} = 24.5\text{ mV}$, $R_L = 6\ \Omega$	-1	0	1	dB
Cross-talk ^{*1}	CT	$V_{IN} = 24.5\text{ mV}$, $R_L = 6\ \Omega$, $R_G = 10\text{ k}\Omega$	50	60	—	dB
Output offset voltage	V_{OFF}	$R_G = 10\text{ k}\Omega$, $R_L = 6\ \Omega$	-300	0	300	mV
Muting effect ^{*1}	MT	$V_{IN} = 24.5\text{ mV}$, $R_L = 6\ \Omega$	60	82	—	dB
Standby terminal voltage	I_{CQ-STB}	$V_{IN} = \text{open}$, $V_{STB} = 5\text{ V}$	—	—	50	μA

Note) *1 : Measurement using a bandwidth 15 Hz to 30 kHz (12 dB/OCT) filter.

*2 : $V_{CC} = 24\text{ V}$

■ Usage Notes

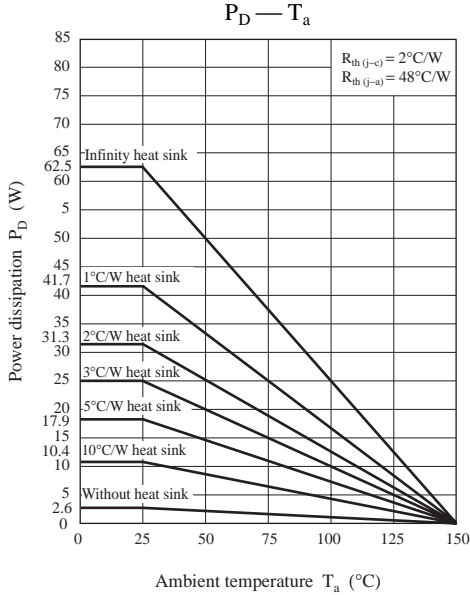
1. Always attach an outside heat sink when using the chip. In addition, the outside heat sink must be fastened onto a chassis for use.
2. Connect the cooling fin to GND potential.
3. Avoid short circuit to V_{CC} and short circuit to GND, and load short-circuit.
4. The temperature protection circuit will be actuated at $T_j = \text{approx. } 150^\circ\text{C}$.
However, it is automatically reset when the chip temperature drops below the above set level.
5. The overvoltage protection circuit starts its operation at $V_{CC} = \text{approx. } 26\text{ V}$.
6. For the standby voltage, a stabilized power supply of 3 V or higher should be used.
7. Only when being used in combination with the AN7077Z, this IC can operate up to the supply voltage of approx. 25.4 V which is the maximum output voltage of the AN7077Z.

■ Technical Information

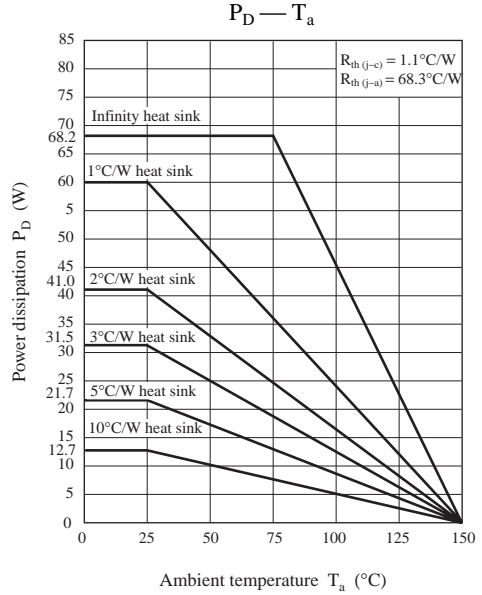
• $P_D - T_a$ curves of packages

Note) After fixing all of the lead wires to printed circuit board by soldering, use the IC after fixing the printed circuit board and the cooling fin of the IC.

• AN7194K (HZIP016-P-0665B)



• AN7194Z (HZIP015-P-0745A)



■ Application Circuit Example

