

Preliminary

4.6W AUDIO POWER AMP**KA22067****GENERAL DESCRIPTION**

The KA22067 is a two channel power amplifier with 4.6W typical output on 12.0V Vcc.

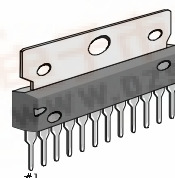
It's typical output is 4.6W on VCC = 12.0V. There is no needs of a bootstrap-capacitor due to the use of V-PNP for a power transistor.

So, it is an advantage for making a whole system. It has an additional stand-by function, the pop noise on switc hing it's mute function is much reduced.

The KA22067 has the built-in thermal protection function with hysteresis in order to protect a blocking oscillation in a short period due to a repeated protection switching on overheating of IC.

The KA22067 has a built-in output-vcc or output-gnd short protection function.

12-SIPH-B

**FEATURES**

- Two channel 4.6W power Amp (Vcc = 12.0V)
- High power with non bootstrap capacitor
- Mute function
- Stand-by function: 100uA
- Very low pop noise, when mute on/off
- Wide operation voltage: 6.0V ~ 18.0V
- Include thermal protection with hysteresis
- Output-Vcc, output-GND short protection

ORDERING INFORMATION

Device	Package	Operation Temperature
KA22067	12-SIPH-B	-25 ~ +75°C

PIN DESCRIPTION

Terminal		Type	Description
Name	No.		
Vcc	3, 12	Vcc, PVCC	Power supply
GND	9	GND	Ground
INPUT 1,2	6, 7	INPUT	Input
NF 1,2	5, 8	NF	Pin for negative feedback capacitor
OUTPUT 1, 2	2, 10	OUTPUT	Output
RR	4	RR	Pin for ripple rejection
STAND-BY	11	ST	Pin for stand-by mode
MUTE	1	MT	Pin for mute function control

BLOCK DIAGRAM

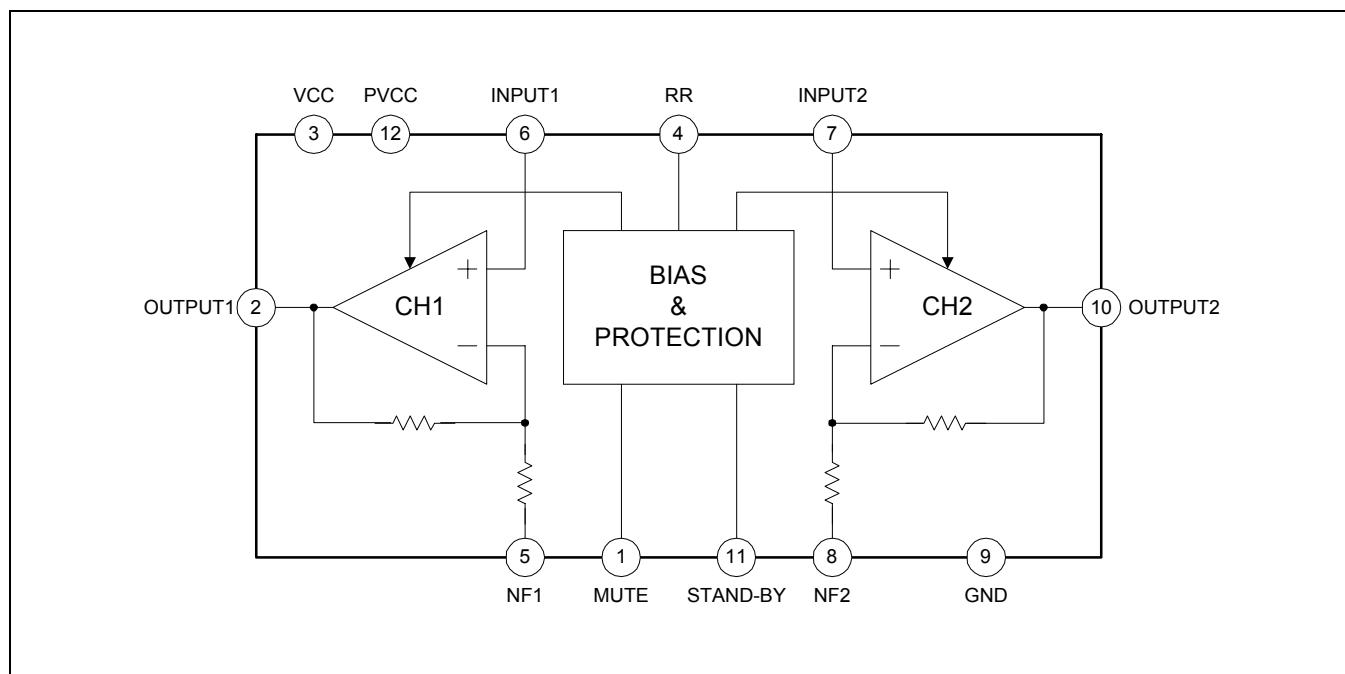


Figure 1.

PIN CONFIGURATION

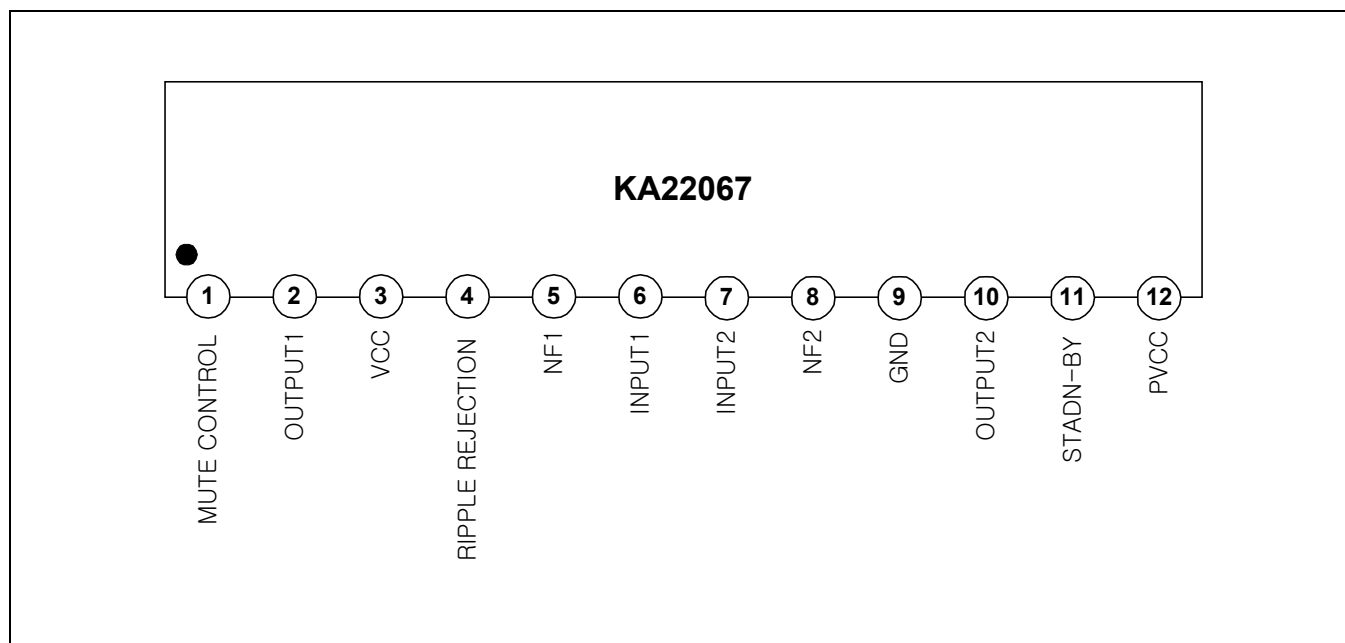


Figure 2.

ABSOLUTE MAXIMUM RATINGS

Parameter	System	Ratings	Unit
Maximum supply voltage	VCCmax	18	V
Maximum supply current	Ipeak	2.5	A
Power Dissipation	Pd	12.5	W
Operating temperature	Topr	– 12 ~ 75	°C
Storage temperature	Tstg	– 40 ~ 150	°C

ELECTRICAL CHARACTERISTICS

Parameter	Symbol	condition	Spec			Unit
			Min.	Typ.	Max.	
Supply Current	I _{cc}	V _i = 0	–	20	45	mA
Standby Current	I _{sb}	V _{pin11} = 0	–	–	100	μA
Maximum Power	P _{o1}	THD = 10%	2.0	2.5	–	W
	P _{o2}	THD 10%, V _{cc} = 12.0V	4.0	4.6	–	W
THD	THD	P _o = 1W	–	0.1	0.9	%
Voltage Gain	AV1	R _f = 51Ω, V _o = 0.775V	38	40	42	dB
	AV2	R _f = 0Ω, V _o = 0.775V	44	46	48	dB
Channel Balance	CB	R _f = 0Ω, V _o = 0.775V	– 2.0	0.0	2.0	dB
Input Resistance	R _i	–	32	40	48	kΩ
Output Noise	V _{no}	R _g = 10Ω, BW = 20 ~ 20kHz	–	0.2	1.0	mV _{rms}
Ripple Rejection Ratio	RR	R _g = 600Ω, f = 120kHz	46	–	–	dB
Channel Crossover Ratio	CT	R _g = 10Ω, f = 1kHz, V _o = 0dBm	40	–	–	dB
Standby Changing Voltage	V _{sb}	–	0	–	0.9	V
Mute Changing Voltage	V _{mt}	–	0	–	0.25	V
Mute Attenuation Ratio	R _{mt}	V _{pin1} = 0	–	–	-60	dB

APPLICATION CIRCUIT

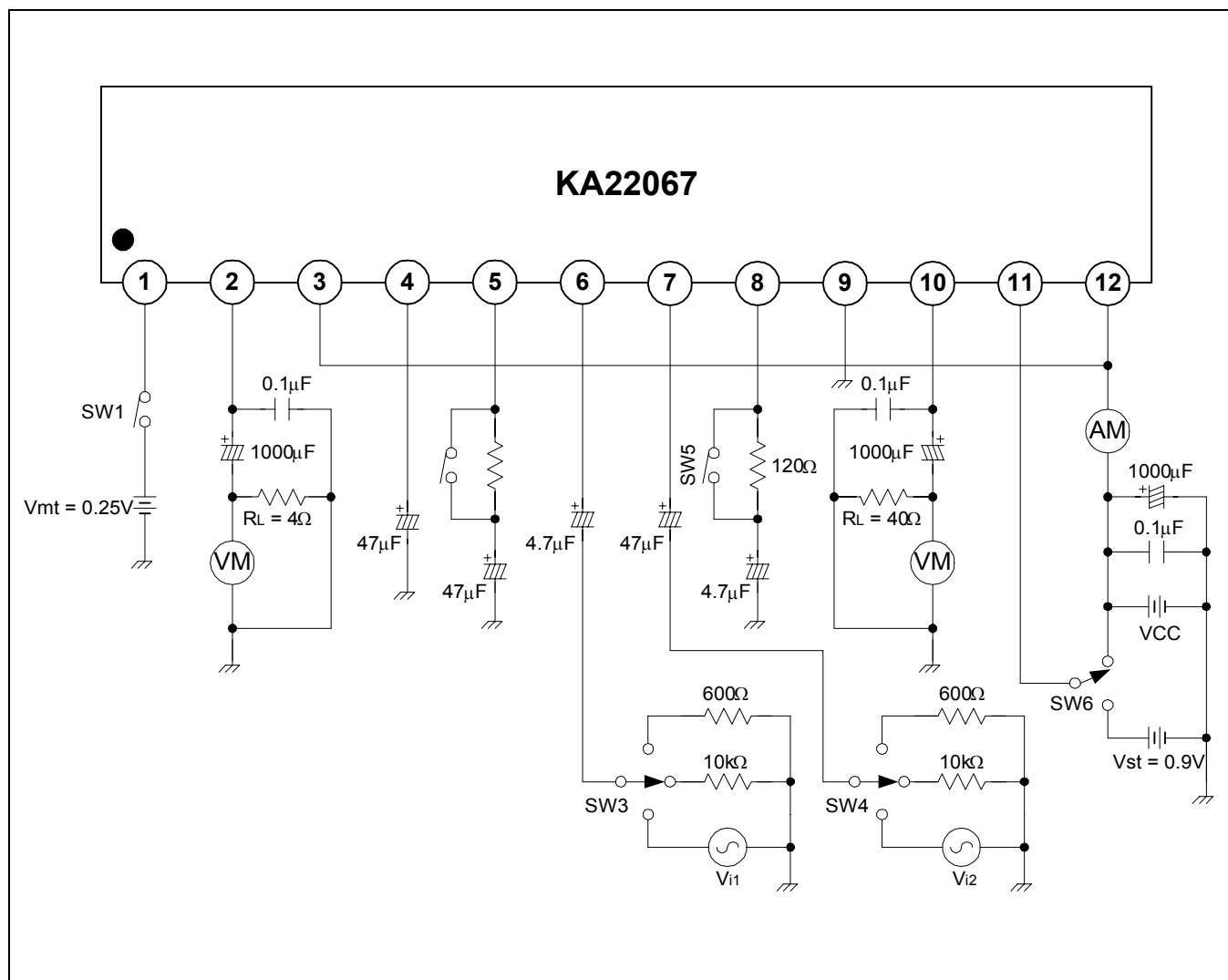


Figure 3.

