

## Mono 1W Filterless Non Clip class D Audio Power Amplifier

### Description

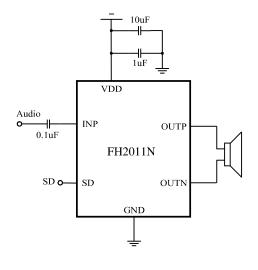
FH2011N is a 1.0W(RL=8) Class-D audio power amplifier. FH2011N uses the filter-less method allowing the speaker to be directly connected to the output and features low-level distortion and noise characteristics.

FH2011N has non-clip function to control gain automatically and prevent output signal from being clipped at the supply voltage.

FH2011N has over-current and over-temperature protection function, under-voltage locked function, as well as EMI noise and pop noise reduction functions.

The FH2011N is available in SOT-23-6L packages.

#### **■** Application Information



#### **■** Features

- 1.0W Output at 1% THD with 8 load at 5V Power Supply
- Filterless, Low Quiescent Current and Low EMI
- High Efficiency up to 89%
- Soft Start Function
- VULO and OCP Protection
- Thermal Shutdown
- Pb-Free Package

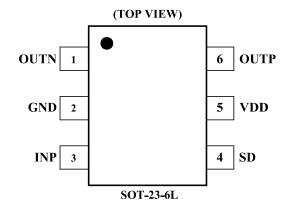
### Package Type

• SOT-23-6L

#### Application

- Wireless or Cellular Handsets and PDAs
- Personal Navigation devices
- General Portable Audio devices

#### **■** Pin Configuration



#### ■ Pin Description

| Pin Number | D: N     |  |  |
|------------|----------|--|--|
| SOT-23-6L  | Pin Name | Function Description   |  |
| 4          | SD       | Chip Enable  |  |
| -          | NC       | NC Not connected  INP Positive Input  INN Negative Input  OUTP Positive Output |  |
| 3          | INP      |  |  |
| -          | INN      |  |  |
| 6          | OUTP     |  |  |
| 5          | VDD      | Power Supply   |  |
| 2          | GND      | Ground   |  |
| 1          | OUTN     | Negative Output  |  |

## 1W 超低EMI 防破音 无需滤波 D 类音频功率放大器

#### ■ 产品概述

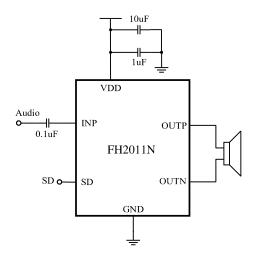
FH2011N 是一款 1W (RL=8)的 D 类音频功率放大器。 FH2011N 没有滤波器,使得扬声器可以直接连到输出,并且 具有低失真、低噪声的特点。FH2011N 利用无破音技术控制 自动增益,防止输出信号因为输入信号出现失真。FH2011N 具有过流保护、过温保护、欠压锁定等功能,以及降低 EMI 跟"砰砰"噪声功能。

FH2011N 使用 SOT-23-6L 小封装形式。

#### ■ 产品应用

- 移动电话
- MP3 播放器
- PDA
- 个人导航设备
- 便携式音频设备

#### ■ 典型应用电路



#### ■ 产品特点

- 1W 输出 (THD=1%, RL=8, Power Supply=5V)
- 无滤波器、低静态电流、低 EMI
- 高效率 η =89%
- 软启动功能
- 过流保护
- 欠压锁定
- 过温保护
- 小封装

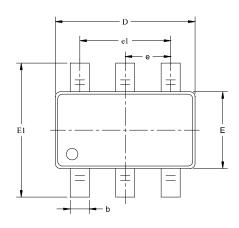
#### ■ 封装形式

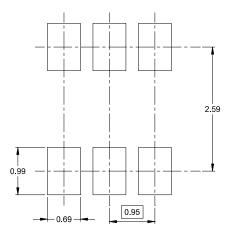
• SOT-23-6L



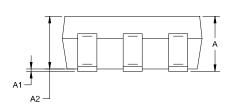
# Package Information

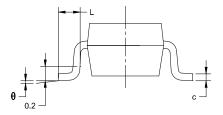
• Type: SOT-23-6L





RECOMMENDED LAND PATTERN(Unit: mm)





| Symbol | Dimensions<br>In Millimeters |       | Dimensions<br>In Inches |       |  |
|--------|------------------------------|-------|-------------------------|-------|--|
| v      | MIN                          | MAX   | MIN                     | MAX   |  |
| A      | 1.050                        | 1.250 | 0.041                   | 0.049 |  |
| A1     | 0.000                        | 0.100 | 0.000                   | 0.004 |  |
| A2     | 1.050                        | 1.150 | 0.041                   | 0.045 |  |
| b      | 0.300                        | 0.500 | 0.012                   | 0.020 |  |
| С      | 0.100                        | 0.200 | 0.004                   | 0.008 |  |
| D      | 2.820                        | 3.020 | 0.111                   | 0.119 |  |
| Е      | 1.500                        | 1.700 | 0.059                   | 0.067 |  |
| E1     | 2.650                        | 2.950 | 0.104                   | 0.116 |  |
| e      | 0.950                        | BSC   | 0.037 BSC               |       |  |
| e1     | 1.90 0 BSC                   |       | 0.075 BSC               |       |  |
| L      | 0.300                        | 0.600 | 0.012                   | 0.024 |  |
| θ      | 0°                           | 8°    | 0°                      | 8°    |  |



### Ordering Information

| Part Number | Voltage Range | Features   | Operating<br>Temperature | Package Type | Top Mark     | SPQ          |
|-------------|---------------|--|--------------------------|--------------|--------------|--------------|
| FH2011NM6   | 2.5V ~ 5.5V   | <ul> <li>Single Audio Input</li> <li>Output Power:1.0W</li> <li>Efficiency up to 89%</li> <li>Type: Class-D</li> </ul> | -40°C to 85°C            | SOT-23-6L    | DIA <u>X</u> | 3000PCS/Reel |

#### Note:

- > FH2011N devices are Pb-free and RoHs compliant.
- > The surface prints of our semiconductor devices are subject to change during the production process and do not involve changes in electrical parameters, and we will not separately state the notice.
- > If you have any other custom purchase needs, please contact our sales department.



#### **ESD SENSITIVITY CAUTION**

ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because very small parametric changes could cause the device not to meet its published specifications.















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