

High-speed, Low Power Dissipation DAC

PRODUCT DESCRIPTION

The MS9708/MS9714 is a 8-Bit/14-Bit high-speed and low power dissipation DAC. When sample rate reaches 125MSPS, the MS9708/MS9714 can also provide perfect AC and DC characteristics.

The DVDD normal operating voltage ranges from +1.8V to +5.5V and the AVDD normal operating voltage ranges from +2.7V to +5.5V. The feature of low power dissipation can make it suitable for portable and low power dissipation products. By decreasing full-scale current output, power dissipation can be reduced to 45mW without affecting performance.

The MS9708/MS9714 adopts a segmented current source architecture and specialized switch technique, in order to reduce parasitic effect and improve dynamic characteristics. Edge-triggered latch and temperature compensated bandgap reference are integrated together so as to get a complete monolithic DAC solution. Full-scale current output is 20mA and output impedance is more than 100kΩ.

Complementary current output provides single-end or differential applications. Current output terminal can be connected with two output resistors, achieving two complementary, single-ended voltage outputs.

The MS9708/MS9714 includes a 1.2V internal reference and reference current control amplifier, which can set full-scale current by adjusting external resistor. The MS9708/MS9714 can also connect with external reference. The output current is from 2mA to 20mA without affecting dynamic characteristics.

The MS9708/MS9714 is available in TSSOP28 package.

FEATURES

- 8bit Resolution (MS9708), 14bit Resolution (MS9714)
- Update Rate: 125MSPS
- Power Dissipation: 175mW @ 5V to 45mW @ 3V
- Power-down Mode: 20mW @ 5V
- Internal Reference: 1.2V
- Edge-Triggered Latch
- TSSOP28 Package



TSSOP28

APPLICATIONS

- Communication
- Signal Reconstruction
- Portable Device

PRODUCT SPECIFICATION

| Part Number | Package | Marking |
|-------------|---------|---------|
| MS9708 | TSSOP28 | MS9708 |
| MS9714 | TSSOP28 | MS9714 |