

## CIR-S4SUSV2108G

DDR4 SO-DIMM 2133MHz 8GB

### Description

This specification defines the electrical and mechanical requirements for 260 pin, 1.2 V (VDD), Double Data Rate, Synchronous DRAM Dual In-Line Memory Modules (DDR4 SDRAM SO-DIMM). This DDR4 SO-DIMM is intended for use as main memory when installed in PCs, laptops and other systems.

Reference design examples are included which provide an initial basis for DDR4 SO-DIMM designs.

Modifications to these reference designs may be required to meet all system timing, signal integrity and thermal requirements for DDR4-2133 support. All DDR4 SO-DIMM implementations must use simulations and lab verification to ensure proper timing requirement and signal integrity in the design.

### Specifications

|                        |                   |
|------------------------|-------------------|
| Density                | 8GB               |
| Pin Count              | 260pin            |
| Type                   | Unbuffered        |
| Dimensions             | 69.60mm x 30.00mm |
| ECC                    | Non-ECC           |
| Component Config       | 512M x 8 bit      |
| Data Rate              | 2133 MHz          |
| CAS Latency            | 15                |
| Voltage                | 1.2V              |
| PCB Layers             | 10                |
| Operating Temp.(TCASE) | 0°C~+85°C         |
| Module Ranks           | Dual Rank         |

### Features

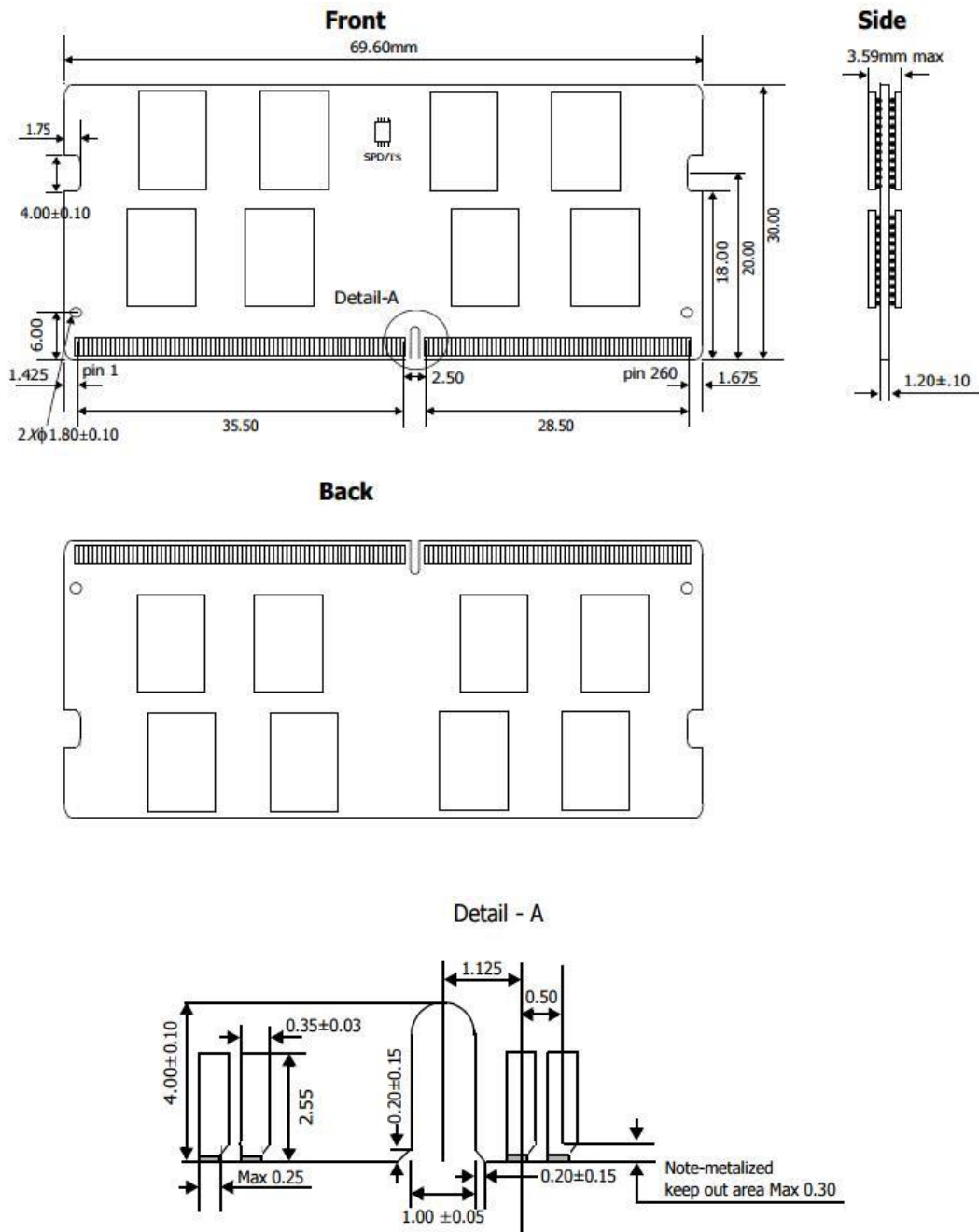
- JEDEC standard
- VDD=VDDQ = 1.2V±0.06V (1.14V~1.26V)
- Programmable CAS Latency(posted CAS): 11,12,13,14,15
- 8-bit pre-fetch
- 16 Banks (4 Bank Groups)
- Internal(self) calibration : Internal self calibration through ZQ pin
- On Die Termination using ODT pin
- Average Refresh Period
  - 7.8us ( TCASE ≤ 85°C )
  - 3.9us (85°C < TCASE < 95°C)
- Asynchronous Reset pin supported
- Burst Length: 8 or BC4
- POD (Pseudo Open Drain) interface for data input/output
- Serial presence detect (SPD)
- All of products are Halogen-free
- All of Lead-Free products are compliant for RoHS

### Speed Grade

| Frequency Grade | Data Transfer Rate | CAS Latency Support |      |      |      |      | CL-tRCD-tRP |
|-----------------|--------------------|---------------------|------|------|------|------|-------------|
|                 |                    | CL11                | CL12 | CL13 | CL14 | CL15 |             |
| DDR4-2133       | PC4-17000          | 1600                | 1600 | 1866 | 1866 | 2133 | 15-15-15    |

### Package Dimensions

Unit: mm



Tolerances : ± 0.15mm unless otherwise specified