

CIR-W4SUSZ2904G

DDR4 WIDE TEMP. SO-DIMM 2933MHz 4GB

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 DDR4-2933 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 | 4GB |
| Pin Count | 260pin |
| Type | Unbuffered |
| Dimensions | 69.60mm x 30.00mm |
| ECC | Non-ECC |
| Component Config | 512M x 8 bit |
| Data Rate | 2933 MHz |
| CAS Latency | 21 |
| Voltage | 1.2V |
| PCB Layers | 8 |
| Operating Temp.(TCASE) | -40°C~+95°C |
| Module Ranks | Single Rank |

Features

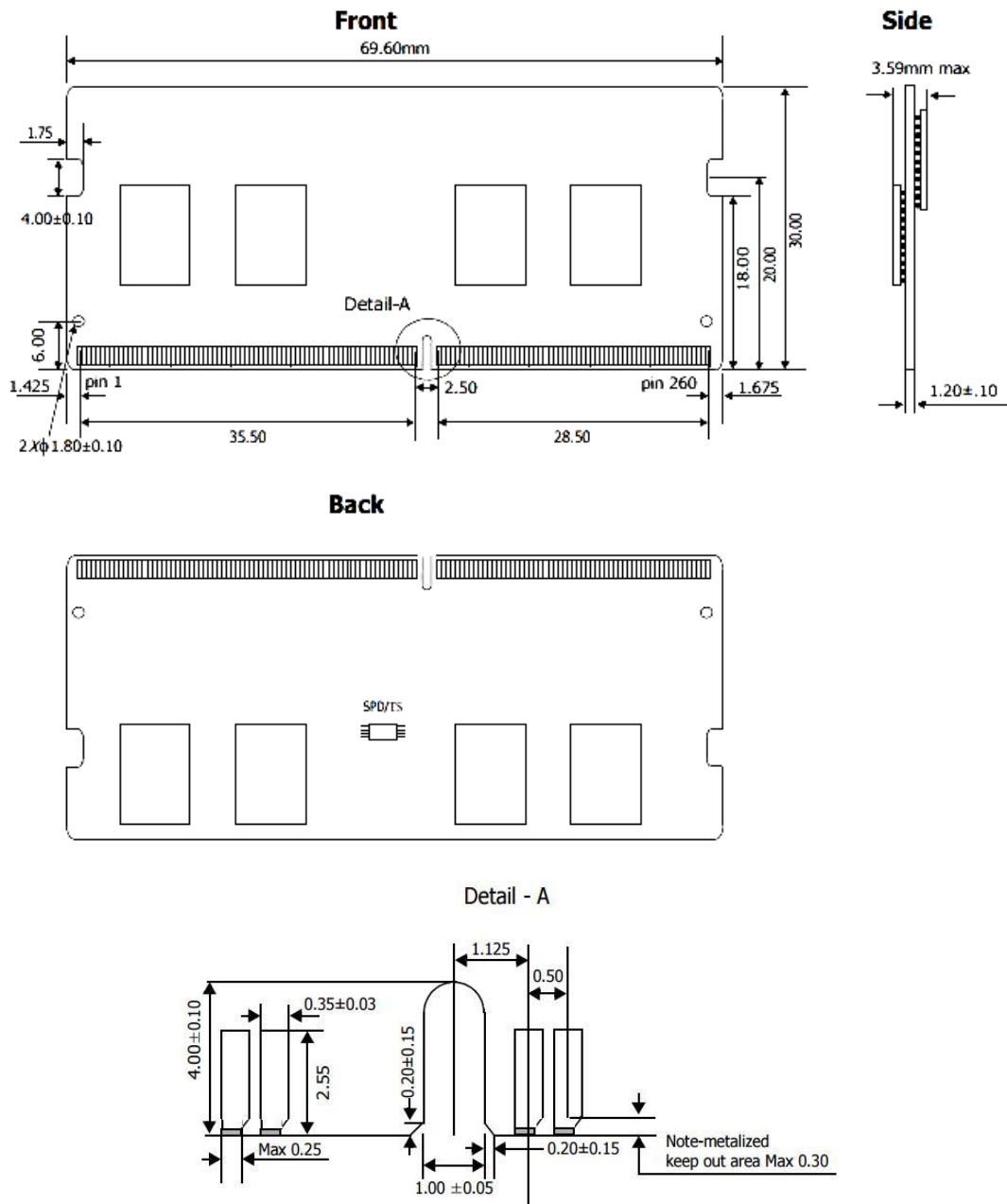
- JEDEC Standard 260-pin Small Outline Dual In-Line Memory Module
- Inputs and Outputs are SSTL-12 compatible
- VDD=VDDQ = 1.2V±0.06V (1.14V~1.26V)
- Programmable CAS Latency(posted CAS): 11,12,13,14,15,16,17,18,19,20,21
- Low-Power auto self-refresh (LPASR)
- SDRAMs have 16 internal banks for concurrent operation (4 Bank Group of 4 banks each)
- Normal and Dynamic On-Die Termination for data, strobe and mask signals
- Data bus inversion (DBI) for data bus
- Fixed burst chop (BC) of 4 and burst length (BL) of 8 via the MRS
- Selectable BC4 or BL8 on-the fly (OTF)
- Fly-By topology
- Terminated control, command and address bus
- RoHS and Halogen free

Speed Grade

| Frequency Grade | Data Transfer Rate | CAS Latency Support | | | | | | | | | | | CL-tRCD-tRP |
|-----------------|--------------------|---------------------|------|------|------|------|------|------|------|------|------|------|-------------|
| | | CL11 | CL12 | CL13 | CL14 | CL15 | CL16 | CL17 | CL18 | CL19 | CL20 | CL21 | |
| DDR4-2933 | PC4-23466 | 1600 | 1600 | 1866 | 1866 | 2133 | 2133 | 2400 | 2400 | 2666 | 2666 | 2933 | 21-21-21 |

Package Dimensions

Unit: mm



Tolerances : ± 0.15mm unless otherwise specified