

## CIR-V4DASY2916G

DDR4 Registered DIMM 2933MHz 16GB

### Description

This specification defines the electrical and mechanical requirements for 288 pin, 1.2 V (VDD), Double Data Rate, Synchronous DRAM Dual In-Line Memory Modules.

Reference design examples are included which provide an initial basis for DDR4 R-DIMM designs. Modifications to these reference designs may be required to meet all system timing, signal integrity and thermal requirements for DDR4-2933 support.

### Specifications

|                        |                    |
|------------------------|--------------------|
| Density                | 16GB               |
| Pin Count              | 288pin             |
| Type                   | Registered         |
| Dimensions             | 133.35mm x 31.25mm |
| ECC                    | with ECC           |
| Component Config       | 1G x 8 bit         |
| Data Rate              | 2933 MHz           |
| CAS Latency            | 21                 |
| Voltage                | 1.2V               |
| PCB Layers             | 8                  |
| Operating Temp.(TCASE) | 0°C~+95°C          |
| Module Ranks           | Dual Rank          |

### Features

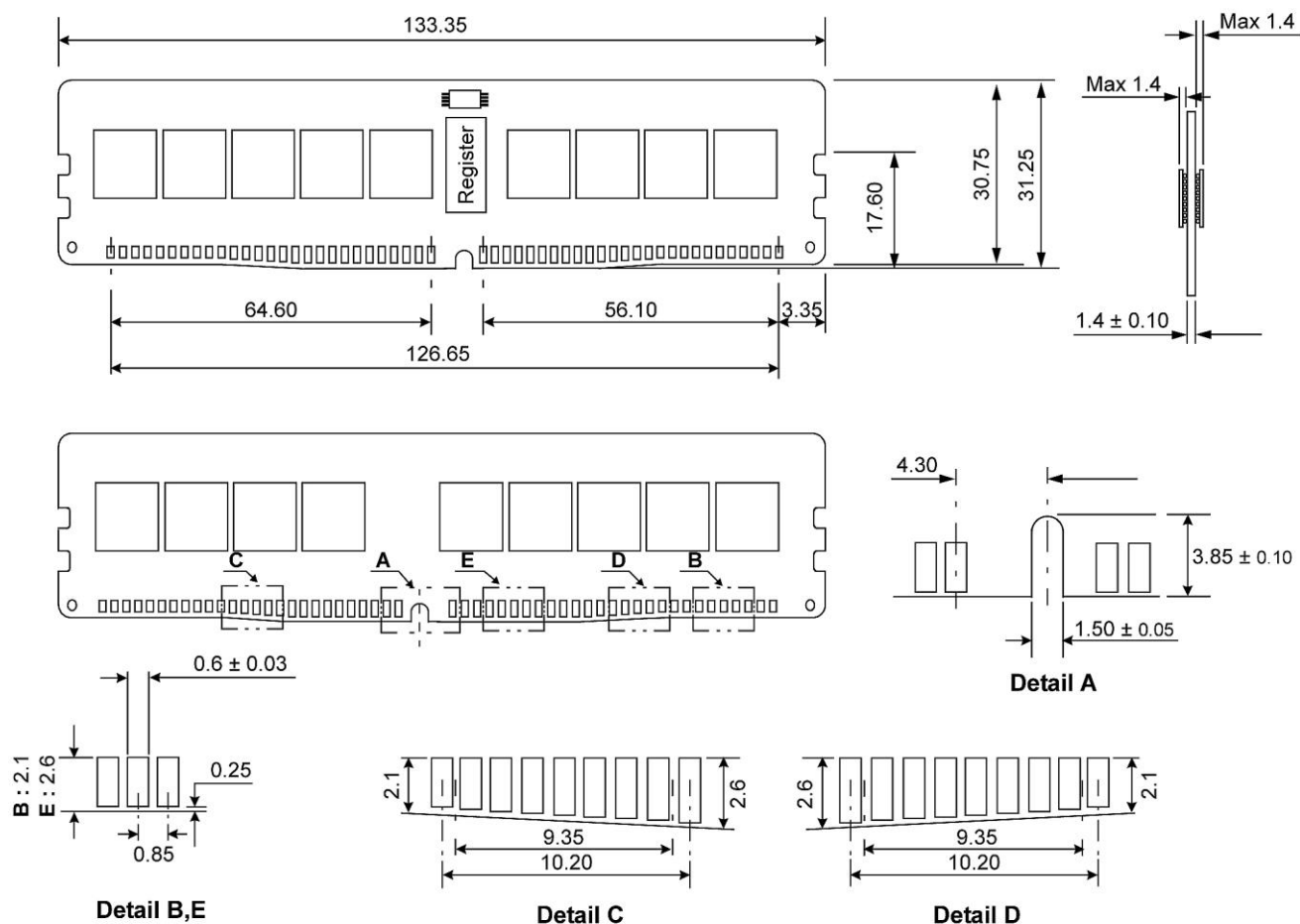
- JEDEC Standard 288-pin Registered Dual In-Line Memory Module
- Inputs and Outputs are SSTL-12 compatible
- VDD=VDDQ= 1.2 Volt (1.14V~1.26V)
- VPP=2.5 Volt (2.375V~2.75V)
- VDDSPD=2.2-3.6V
- Programmable CAS Latency: 11,12,13,14,15,16,17,18,19,20,21
- SDRAMs have 16 internal banks for concurrent operation (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
- Terminated control, command and address bus
- On-die VREFDQ generation and Calibration
- Temperature Sensor with SPD EEPROM
- RoHS Compliant

## Speed Grade

| Frequency<br>Grade | Data<br>Transfer<br>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 :  $\pm 0.15\text{mm}$  unless otherwise specified