

GENERAL DESCRIPTION

This chapter gives an overview of the 288-pin DDR4 Dual-In-Line memory modules product family and describes its main characteristics.

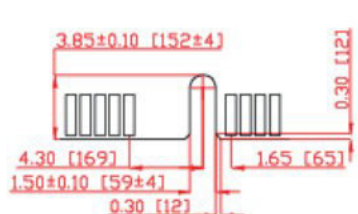
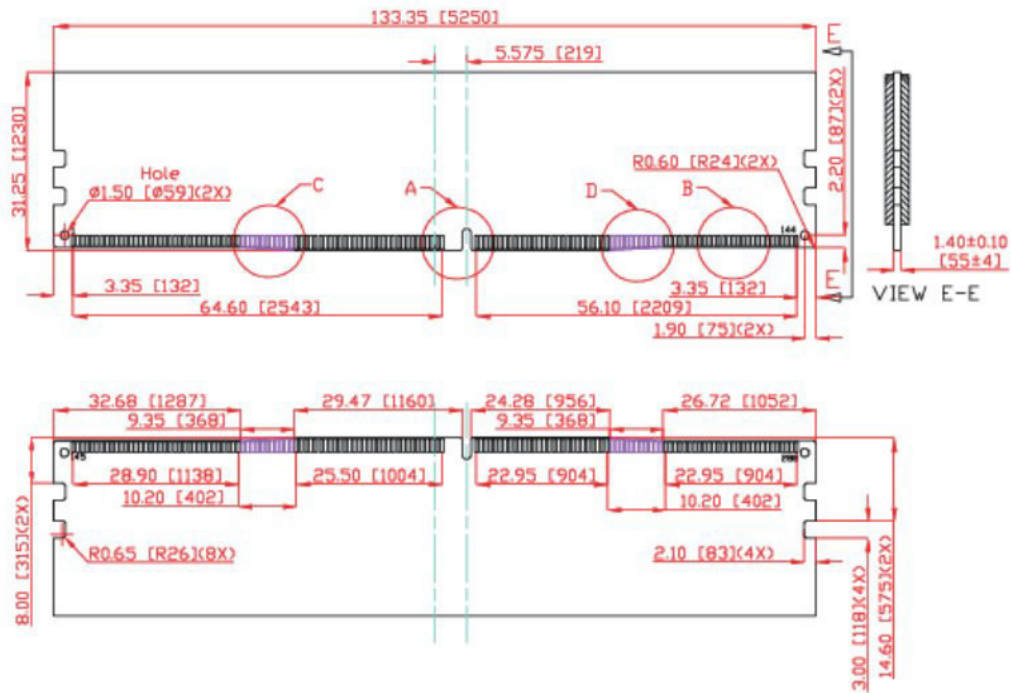
FEATURES

- VDD=VDDQ=1.2V +/- 0.06V
- VPP = 2.5V, -125mV/+250mV
- On-die, internal, adjustable VREFDQ generation
- 1.2V pseudo open-drain I/O
- TC of 0°C to 85°C
- 64ms, 8192-cycle refresh at 0°C to 85°C
- JEDEC standard 78ball FBGA
- Programmable data strobe preambles
- Data strobe preamble training
- Command/Address latency (CAL)
- Multipurpose register READ and WRITE capability
- Write and read leveling
- Self refresh mode
- Low-power auto self refresh (LPASR)
- Temperature controlled refresh (TCR)
- Fine granularity refresh
- Self refresh abort
- Maximum power saving
- Output driver calibration
- Nominal, park, and dynamic on-die termination(ODT)
- Data bus inversion (DBI) for data bus
- Command/Address (CA) parity
- Databus write cyclic redundancy check (CRC)
- Per-DRAM addressability
- Post package repair (PPR) and soft post package repair (sPPR) modes • JEDEC JESD-79-4 compliant

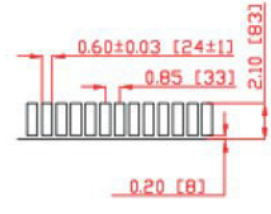
Information for Compliant Products

Product Type	Compliance Code	Description
IND-ID4P21SP32X	32GB DDR4-2133 15/15/15	1 Ran, Non-ECC
IND-ID4P24SP32X	32GB DDR4-2400 17/17/17	1 Ran, Non-ECC
IND-ID4P26SP32X	32GB DDR4-2666 19/19/19	1 Ran, Non-ECC
IND-ID4P29SP32X	32GB DDR4-2933 21/21/21	1 Ran, Non-ECC
IND-ID4P32SP32X	32GB DDR4-3200 22/22/22	1 Ran, Non-ECC
IND-ID4P36SP32X	32GB DDR4-3600 22/22/22	1 Ran, Non-ECC

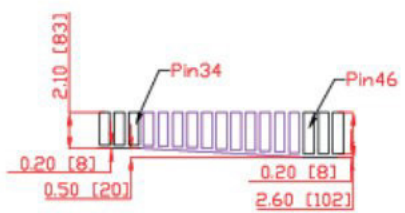
Module Dimensions



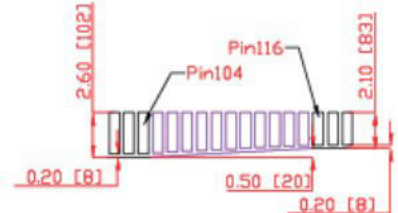
Detail A



Detail B



Detail C



Detail D

Note:
 All dimensions are in millimeters[mils] and should be kept within a tolerance of ±0.15 [6], unless otherwise specified.
 ※Above Picture is for reference only!

Units: Millimeters