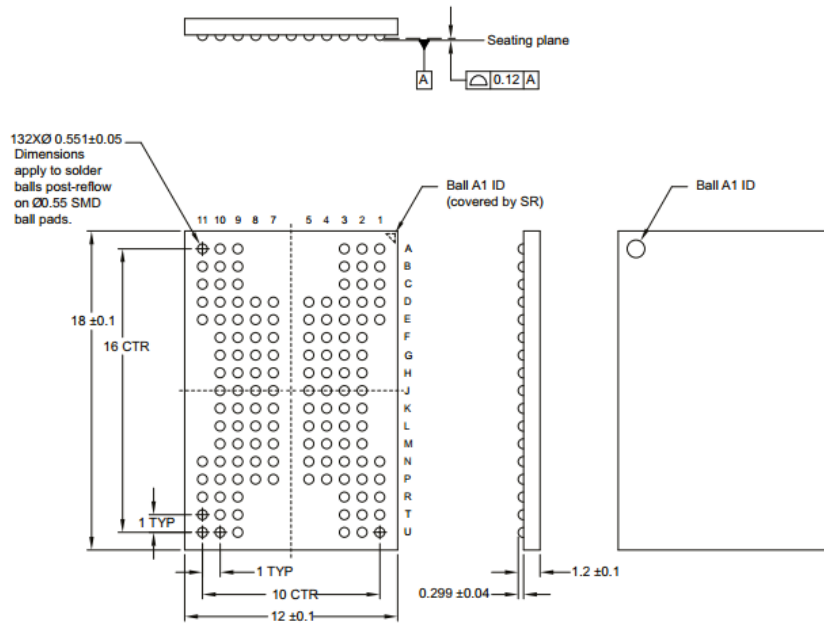


4 Terabit NAND Flash Memory devices :

S.No.	Synchronous NAND Flash Memory Generic Specifications	
1	Memory technology	3D NAND
2	Memory Capacity	4Tb
3	Open NAND Flash Interface (ONFI) Compliance	ONFI 4.2 Standard or higher
4	JEDEC NAND Flash Interoperability	JESD230D Standard or higher
5	Operating Voltage Range	V _{cc} : 2.35V-3.6V V _{ccq} : 1.14V-1.26V
6	Operating Temperature	Better than -40°C to +85°C
7	Package Type	132 - ball BGA
8	Package Dimensions	12mm x 18mm x 1.3mm (Detailed drawing attached)
9	Memory Cell Technology	TLC, should support operations in SLC mode as well
10	Device Organization	Block Diagram attached
11	Page Size (Bytes)	equal to 18,352 bytes (16384 + 1968 bytes)
12	No.of Pages per Block	equal to 2112
13	Plane Size	4 planes with 556 blocks each
14	No.of Dies(LUNs)	equal to 8
15	I/O	NV-DDR3
16	Timing Modes(TM) to be supported	NV-DDR3 - TM0-TM15
17	Read/Write Throughput	NV-DDR3 - better than 1.6 GT/s
18	SNAP READ operation time	Better than 60μs (TYP)
19	Single-Plane READ PAGE operation time	Better than 63μs (TYP)
20	Effective Program page time	Better than 600μs (TYP)
21	Erase block time	Better than 8ms (TYP)
22	Command Set	ONFI 4.2 Standard or higher
23	First block (block address 00h) validity when shipped from factory	Mandatory
24	TLC Endurance	Better than 3,000 PROGRAM/ERASE cycles
25	SLC Endurance	Better than 60,000 PROGRAM/ERASE cycles
26	On Die Termination	Supported

• **Package Dimensions**



- Notes: 1. All dimensions are in millimeters.
 2. Solder ball material: SACQ (92.45% Sn, 4.0% Ag, 3.0% Bi, 0.5% Cu, 0.05% Ni).

- **Device Organization**

