

SpecTek[®] Buyers Guides

Last Revision: April 7, 2025



SpecTek Buyers Guide >> NAND

Grade	Product Type	Yield ¹	Customer Application	RMA Policy	Technical Notes	Sample MPNs	Web Links
AS More Details	Package	~ 97%	PCIe/SATA Consumer SSDs, USB/SD	YES – 90 Days Warranty < 1,000pcs RMAs NOT Accepted	- Datasheet Support. Use Factory Marked Blocks - DDP, QDP, 154b	1600MT/s: FBNN48R4T1KLMAEJ4-AS 2400MT/s: FBNN48R4T1KLMAEJ4-24AS 3600MT/s: FBNN48R4T1KLMAEJ4-36AS	RMA Rapid Response NAND Component/Die/Wafer Part Number Guide Online Decoder Device Markings SpecTek Datasheets Roadmap Questions / Feedback
PG	Package	~ 70%	Consumer SATA SSDs, USB/ SD	NO RMA: will only review cases if yield loss is significant	- NVB Not Guaranteed. Sorting Needed - No Datasheet, Single/double plane firmware recommended	FBMB27A8T0KTWAFM5-PG	
E0 More Details	Uncut Wafer	~ 99% ²	PCIe/SATA Consumer SSDs, USB/SD, Mobile	NO RMA on Wafer/Die	- Datasheet Support. Use Factory Marked Blocks - Wafer Maps and Bonding Diagram available - Stack capable	2400MT/s (150us dSLC Program Time): WY4B68SNNNXAA-NAE0E 2400MT/s (90us dSLC Program Time): WY4B68SNNNXAA-NAE0EC 3600MT/s (80us dSLC Program Time): WY4B68SNNNXAA-NAE0EK	
E8	Cut Die on Reconstructed Wafer	~ 80%	PCIe/SATA Consumer SSDs, USB/SD	NO RMA on Wafer/Die	Bonding Diagram Only. Sorting Needed	WY4B68SNNNXAA-NAE8U	
E5	Cut Die on Reconstructed Wafer	~ 50%	Consumer SATA SSDs, USB/SD	NO RMA on Wafer/Die	Bonding Diagram Only. Sorting Needed	W3UB68SNUNXNZ-NAE5U	
EW	Partial Density Uncut Wafer ³	N/A	N/A	NO RMA on Wafer/Die	- Bonding Diagram Only. Sorting Needed - No Wafer maps	WBUB68SDBNXNZ-NAEWA	
EX	Carcass Die	N/A	N/A	NO RMA on Wafer/Die	Die Left on blue tape after all Micron and SpecTek die picked	WBUL84DDBNXNZ-NAEXA	

General Support Notes (READ):

- **1** Yield estimates are averaged based on **SDP** packages and may vary lot to lot. Yields also influenced by controllers and firmware capabilities and validated on limited number of common controllers.
- **2** Yield Note: 99% yield is applicable to 150s/160s and for SDP assembly ONLY with up to 2% yield variations. Expect yields to be ~95% or better on 140s and prior.
- **3** Uncut Wafers, Partial Density: Partial Density Wafers contain die at a partial functional level in its capacity, yield and/or reliability. No warranty and No maps offered. Die level sorting is highly recommended.
- 150s/160s NAND devices are not recommended for use in applications that require data to be pre-programmed in the NAND array prior to Reflow, Surface Mount or any thermal processing. Please consult with your Micron representative for details.
- Cosmetic Defects are not covered under SpecTek RMA Policy. All RMAs **must** be returned in either the original packaging or an ESD safe container(trays, tape and reel) or the RMA may be rejected.
- Consumer SSDs: SSDs with Non-Binary Densities such as 500GB, 1000GB.

SpecTek Wafer/Package MPN Grade

WAFER (April 7, 2025)

MPN	IO Speed MT/s	Dynamic SLC tPROG	B58R	N58R	B68S	N69R	Interface
	<i>Measured Typical Values</i>		<i>Estimated SSD Seq R/W ¹ values in MB/s</i>				
E0EK	3,600 ²	80 us	--	--	R/W: 10,000 / 9,000 ReadID: 34h	R/W: 10,000 / 9,000 ReadID: 34h	PCIe Gen5
E0EC	2,400	90 us	R/W: 7,000 / >7,000 ReadID: 30h	R/W: 7,000 / 5,500 ReadID: 30h	R/W: 7,000 / >7,000 ReadID: 34h	R/W: 7,000 / >7,000 ReadID: 34h	8ch: PCIe Gen5 4ch: PCIe Gen4
E0E	2,400 ²	150 us	R/W: 7,000 / 5,000 ReadID: 30h	R/W: 7,000 / 4,000 ReadID: 31h	R/W: 7,000 / 5,000 ReadID: 35h	R/W: 7,000 / 5,000 ReadID: 35h	PCIe Gen4

PACKAGE

Package Grades	IO Speed MT/s	Dynamic SLC tPROG	Drive R/W	Packages	Interface
	<i>Measured Typical Values</i>		<i>Estimated Seq R/W values</i>		
-36AS	3,600	80 us	10,000 / 9,000	154b : DDP, QDP	PCIe Gen5
-24AS	2,400	90 us	7,000 / >7,000 ³	154b : DDP, QDP	PCIe Gen4
-AS	1,600	150 us	5,000 / <5,000 ³	154b : DDP, QDP	PCIe Gen3

Notes:

- 1) Seq. Write is estimated based on 1TB drive capacity (2TB for N69R). Lower capacity drives, e.g. 512GB, will have lower performance.
- 2) 160s NAND for 3600 MT/s & N58R for 2400 MT/s higher speed yields requires VCCQ=1.23v.
- 3) N58R has an estimated lower sequential write 5,500 MB/s (-24AS), 4,000MB/s (-AS)

SpecTek Buyers Guide >> NAND >> Approved Controller List

Updated: 4/04/25	Controller and Design ID Compatibility						
Controller	✓ = SpecTek Internally Verified ● = External Source Verified						
PCIe / M.2	B68S	N58R	B58R	B57T	N48R	B47R	B47T
IG5236 (Gen 4)		●	●		●		
IG5220 (Gen 4)		●	●	●	●	●	●
IG5216 (Gen 3)					●	●	●
MAP1202A (Gen 3)		✓				✓	✓
MAP1602 (Gen 4)	✓	✓	✓				
RTS5772DL (Gen3-4)			✓				
RTS5766DL (Gen 3)	✓	✓	✓	✓	✓	✓	✓
SM2263XT (Gen 3)					✓	✓	
SM2268XT2 (Gen4)	✓		✓				
TC2201 (Gen4)		●	●				
SATA	B68S	N58R	B58R	B57T	N48R	B47R	B47T
MAS1102B			✓		✓	✓	✓
PS3111 (& -6)						✓	
RTS5735DL	✓	✓	✓	✓	✓	✓	✓
SM2259XT (& -AC, -130)						✓	✓
SM2259XT2			✓		✓		✓
SM2259XT3		✓					
USB 3.0	B68S	N58R	B58R	B57T	N48R	B47R	B47T
AU89103-TA2			✓		✓	✓	✓
IS918M					✓	✓	
IS918EN				✓			
SM3265 (& -AC)						✓	✓
USB 2.0	B68S	N58R	B58R	B57T	N48R	B47R	B47T
AU6998 (& TA, TG, M85)					✓		✓
SD Card	B68S	N58R	B58R	B57T	N48R	B47R	B47T
AK2705EN (& ENLT)				✓		✓	

SpecTek Buyers Guide >> DRAM

Grade	Product Type	Yield ¹	Customer Application	RMA Policy	Technical Notes	Web Links
PRN / PRM	Package	~ 99%	UDIMM, SODIMM CUDIMM / CSODIMM Module	90 Days Warranty - Minimal RMA QTY: 1000 Units	- Fully Tested & Speed Graded - Datasheet Support - Component Testing Not Required - Sample MPN: PRN1G16Z22AD8RC-062E	RMA Rapid Response Motherboard Compatibility List DRAM Component Part Numbering Guide Online MPN Decoder DRAM Component Mark Reference Laser Mark to MPN Decoder SpecTek Datasheets Roadmaps Questions / Feedback
PRN / PRM OC	Package	N/A	OC UDIMM	90 Days Warranty (JEDEC Timings Only) - Minimal RMA QTY: 1000 Units	- Fully Tested & Speed Graded - Datasheet Support: Refer to JEDEC datasheet - Component Testing Recommended ⁴ - Sample MPN: PRM2G8Y52KBFRZ-56B	
TP	Package	~ 90%	UDIMM / CUDIMM 8-Chip Module	90 Days Warranty - Minimal RMA QTY: 1000 Units	- Datasheet Support (Reference PRN Datasheet) - Component Testing Recommended ² - Sample MPN: SUU512M16Z11BD8LY-TP	
XCB	Module	~ 75%	UDIMM / CUDIMM Module	No RMA: will only review cases if yield loss is significant	- Components on module - No Datasheet - Component Testing Recommended ² - Sample MPN: XCB512M8V00HG8DA-MSPD	
XCBB	Module	~ 75%	UDIMM / CUDIMM Module	No RMA: will only review cases if yield loss is significant	- Components on module, reconfigured to 8 bits - No Datasheet - Component Testing Recommended ² - Sample MPN: XCBB512M8V00HG8DA-MSPD	
PG	Package	~ 50%	UDIMM / CUDIMM Module	No RMA: will only review cases if yield loss is significant	- Partially Good components - No Datasheet - Component Testing Required ³ - Sample MPN: SUM1G16Z22AD8RC-PG	

General Support Notes (READ):

- Yield ¹: Based on MemTest test software.
- Testing Recommended ²: Component testing is recommended prior to assembly.
- Testing Required ³: Customer **must** test the product before assembly.
- Cosmetic Defects are not covered under RMA Policy. All RMAs must be returned in either the original packaging or an ESD safe container(trays, tape and reel) or the RMA may be rejected.
- Testing Recommended ⁴ for OC timings above JEDEC rated timings

SpecTek Buyers Guide >> Low Power DRAM & MCPs

Grade	Product Type	Yield	RMA Policy	Technical Notes	Web Links
BT	Package	~ 85% - 95%	No RMA: will only review cases if yield loss is significant	- Testing Required. Yield is dependent on application & chipsets - May also be referred to as “2P Packages” - No Datasheet - Sample MPN: SN512M32Z42MD1DNQ-053BT	RMA Rapid Response Mobile DRAM Part Numbering Guide All-in-One Part Numbering Guide eMMC Part Numbering Guide NAND MCP Part Numbering Guide LPDRAM Wafer/Die Part Numbering Guide Online Decoder SpecTek Datasheets Roadmaps Questions / Feedback
UT	Package	~ 80%	No RMA: will only review cases if yield loss is significant	- Testing Required - No Datasheet - Sample MPN: SM2G64Z32MD8DTN-UT	
PG	Package	~ 50%	No RMA: will only review cases if yield loss is significant	- Testing Required - No Datasheet - Sample MPN: SM512M32Z42MD1DNQ-PG	
P2	Uncut Wafer	~ 99%	NO RMA on Wafer/Die	- Wafer Maps and Bonding Diagram Support - Sample MPN: WJ3Z0AMNNNAF-P2E0D	
FP	Cut Die on Reconstructed Wafer	~ 97%	NO RMA on Wafer/Die	- Fully tested good die - May also be referred to as “1P dies” - Bonding Diagram Support Only - Sample MPN: WBFV01MDHAHP-FPE0D	
4P	Half Density Cut Die on Reconstructed Wafer	~ 98%	NO RMA on Wafer/Die	- Fully tested Half-Density good die - Bonding Diagram Support Only - Sample MPN: WBXV01MDHABP-4PE0D	

General Support Notes (READ):

- Target Application: Low-End to Mid Range Tablets, Low-End Mobile Phones, IOT, OTT/STB applications
- Cosmetic Defects are not covered under RMA Policy. All RMAs **must** be returned in either the original packaging or an ESD safe container(trays, tape and reel) or the RMA may be rejected.