SpecTek® Buyers Guides

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SpecTek Buyers Guide >> NAND

Grade	Product Type	Yield	Customer Application	RMA Policy	Technical Notes	Web Links
AS	Package	~ 97%	PCIe/SATA Consumer SSDs, USB/SD	**YES – 90 Days Warranty** **< 1,000pcs RMAs NOT Accepted**	• Datasheet Support. Use Factory Marked Blocks • Sample MPN: FBNN48R4T1KLMAEJ4-**AS**	• RMA Rapid Response • NAND Component/Die/Wafer Part Number Guide • Online Decoder • Device Markings • SpecTek Datasheets • Roadmap • Questions / Feedback
PG	Package	~ 45% (140s only) ~ 70% (150s & Newer)	SATA Consumer 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 • Sample MPN: FBMB27A8T0KTWAFM5-**PG**	
UT	Package	~ 80%	PCIe/SATA Consumer SSDs, USB/SD	**NO RMA:** will only review cases if yield loss is significant	• NVB Not Guaranteed. Sorting Needed • No Datasheet • Sample MPN: FBMB47R8T0KLWAEM5-**UT**	
E0	Uncut Wafer	~ 95%	PCIe/SATA Consumer SSDs, USB/SD, Mobile	**NO RMA on Wafer/Die**	• Datasheet Support. Use Factory Marked Blocks • Wafer Maps and Bonding Diagram available • Sample MPN: WCVM60ANNNXAA-NA**E0**A	
E8	Cut Die on Reconstructed Wafer	~ 80%	PCIe/SATA Consumer SSDs, USB/SD	**NO RMA on Wafer/Die**	• Bonding Diagram Only. Sorting Needed • Sample MPN: W1UB47RDUNXNZ-NA**E8**U	
E5	Cut Die on Reconstructed Wafer	~ 50%	Consumer SATA SSDs, USB/SD	**NO RMA on Wafer/Die**	• Bonding Diagram Only. Sorting Needed • Sample MPN: W3UB47RDUNXNZ-NA**E5**U	
E4	Cut Die on Reconstructed Wafer	~ 40%	Consumer SATA SSDs, USB/SD	**NO RMA on Wafer/Die**	• Bonding Diagram Only. Sorting Needed • Sample MPN: WVUB16ADUNXNZ-NA**E4**U	
EX	Carcass Die	**N/A**	N/A	**NO RMA on Wafer/Die**	• Die Left on blue tape after all Micron and SpecTek die picked • Sample MPN: WBUL84DDBNXNZ-NA**EX**A	

General Support Notes (READ):
➢ Yield estimates are averaged and may vary lot to lot. Yields also influenced by controllers and firmware capabilities and validated on limited number of common controllers.
➢ Data stored on the media prior to IR Reflow could damage the cell structure and reduce the Program/Erase cycles significantly. It is recommended that all blocks be in the erased state prior to IR Reflow.
➢ 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 240GB, 480GB, 960GB.

SpecTek Buyers Guide >> NAND >> Approved Controller List

Consumer SSDs	Controllers	B58R	N48R	B47R	B47T
PCIe Gen 3	SM2263XT		✓	✓	
	MAP1202A			✓	✓
	RTS5766DL	✓	✓	✓	✓
SATA	SM2259XT(2)	✓	✓	✓	✓
	MAS1102B	✓	✓	✓	✓
	RTS5735DL	✓	✓	✓	✓
USB 3.x	SM3265			✓	✓
	AU89103	✓	✓	✓	✓
	IS918M		✓	✓	
USB 2.x	AU6998		✓		✓
SD	AK2705EN			✓	

Notes:

✓ = Controller and DID compatibility internally verified

Micron

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: **PRN**1G16Z22AD8RC-062E	• [RMA Rapid Response](#) • [Motherboard Compatibility List](#)
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**	• [DRAM Component Part Numbering Guide](#) • [Online MPN Decoder](#)
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**	• [DRAM Component Mark Reference](#) • [Laser Mark to MPN Decoder](#)
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:**XCB**512M8V00HG8DA-MSPD	• [SpecTek Datasheets](#) • [Roadmaps](#)
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: **XCBB**512M8V00HG8DA-MSPD	• [Questions / Feedback](#)
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

Micron

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-053**BT**	• [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-**P2E0**D	
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-**FPE0**D	
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-**4PE0**D	

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.