

Product Notification Form

PN #: PCN16-0061.doc	Rev: 1.0	Issue Date: September 19, 2016																																								
Type of Change: S-45 Series SD Memory Cards conversion to new NAND Flash DIE shrink <input type="checkbox"/> minor / <input checked="" type="checkbox"/> major S-40 Series SD Memory Cards conversion to the S-45 Series with the new NAND Flash DIE shrink																																										
Detailed Description of Change: <p>This notification is to inform you about a NAND Flash shrink change. Toshiba will discontinue the supply of A19nm MLC. The Flash DIE of the S-45 Series will be replaced with the latest 15nm MLC NAND technology which offers longer lifecycle support. The S-40 Series will be replaced by the S-45 Series with the new 15nm MLC NAND Flash DIE.</p> <p>Additionally we introduce a new tooling and second source supplier for the SD Memory card housing. This will improve the availability and get higher process stability. An improvement for manual pull out in host sockets with larger pull out cavity is introduced (for additional details see annex).</p> <p><u>Product Series Comparison:</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>S-40</th> <th>S-45</th> <th>New generation: S-45</th> <th>Comment</th> </tr> </thead> <tbody> <tr> <td>Interface</td> <td>SD 3.0</td> <td>SD 3.0 UHS-I</td> <td>SD 3.0 UHS-I</td> <td></td> </tr> <tr> <td>NAND Flash</td> <td>Toshiba A19nm MLC</td> <td>Toshiba A19nm MLC</td> <td>Toshiba 15nm MLC</td> <td></td> </tr> <tr> <td>MCU</td> <td>S8A / S8B</td> <td>S8B</td> <td>S8B</td> <td></td> </tr> <tr> <td>FW</td> <td>Ver 1 / Ver 2</td> <td>Ver A – durabit</td> <td>Ver B – durabit</td> <td>See firmware change log</td> </tr> <tr> <td>PCB</td> <td>LM11, LM21, LM23</td> <td>LM11, LM21, LM23</td> <td>LM12, LM24, LM25</td> <td>Adaption for new DIE sizes</td> </tr> <tr> <td>Package</td> <td>Molding</td> <td>Molding</td> <td>Molding</td> <td></td> </tr> <tr> <td>Speed class</td> <td>Class 6</td> <td>Class 10</td> <td>Class 10</td> <td></td> </tr> </tbody> </table> <p><u>Firmware change log (Ver B):</u></p> <ul style="list-style-type: none"> • durabit FW architecture (page based FTL) • Improved compatibility: <ul style="list-style-type: none"> ○ for critical SD signal quality ○ with USB readers that use life time monitoring and diagnostic features ○ for protocol handling ○ host chipsets • Improved power fail stability by writing 				S-40	S-45	New generation: S-45	Comment	Interface	SD 3.0	SD 3.0 UHS-I	SD 3.0 UHS-I		NAND Flash	Toshiba A19nm MLC	Toshiba A19nm MLC	Toshiba 15nm MLC		MCU	S8A / S8B	S8B	S8B		FW	Ver 1 / Ver 2	Ver A – durabit	Ver B – durabit	See firmware change log	PCB	LM11, LM21, LM23	LM11, LM21, LM23	LM12, LM24, LM25	Adaption for new DIE sizes	Package	Molding	Molding	Molding		Speed class	Class 6	Class 10	Class 10	
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Quality impact: <input type="checkbox"/> minor / <input type="checkbox"/> major / <input checked="" type="checkbox"/> no																																										
Reliability impact: <input type="checkbox"/> minor / <input type="checkbox"/> major / <input checked="" type="checkbox"/> no																																										
Reason for Change: End-Of-Life of Toshiba A19nm NAND Flash																																										

Product Notification Form

Products affected:				
Product Description	Series	EOL Part Number	Series	New Part Number
4GB SD Memory Card	S-45	SFSD4096L2BM1T0-t-GE-2A1-STD	S-45	SFSD4096L3BM1T0-t-GE-2B1-STD
8GB SD Memory Card		SFSD8192L2BM1T0-t-GE-2A1-STD		SFSD8192L3BM1T0-t-GE-2B1-STD
16GB SD Memory Card		SFSD016GL2BM1T0-t-GE-2A1-STD		SFSD016GL3BM1T0-t-GE-2B1-STD
32GB SD Memory Card		SFSD032GL2BM1T0-t-LF-2A1-STD		SFSD032GL3BM1T0-t-LF-2B1-STD
64GB SD Memory Card		SFSD064GL2BM1T0-t-HG-2A1-STD		SFSD064GL3BM1T0-t-HG-2B1-STD
Product Description	Series	EOL Part Number	Series	New Part Number
4GB SD Memory Card	S-40	SFSD4096L2BM1T0-t-GE-1x1-STD	S-45	SFSD4096L3BM1T0-t-GE-2B1-STD
8GB SD Memory Card		SFSD8192L2BM1T0-t-GE-1x1-STD		SFSD8192L3BM1T0-t-GE-2B1-STD
16GB SD Memory Card		SFSD016GL2BM1T0-t-GE-1x1-STD		SFSD016GL3BM1T0-t-GE-2B1-STD
32GB SD Memory Card		SFSD032GL2BM1T0-t-LF-1x1-STD		SFSD032GL3BM1T0-t-LF-2B1-STD
64GB SD Memory Card		SFSD064GL2BM1T0-t-HG-1x1-STD		SFSD064GL3BM1T0-t-HG-2B1-STD
t = temperature grade C or I, x = options and custom configuration				
Implementation date: Conversion phase starting in Q4 2016, for 4GB in Q1 2017				
Forecasted Milestones:				
Density	Milestone		Date	
8GB – 64GB	Qualification samples availability		available	
	Last Time Buy – LTB		Dezember 19, 2016	
	Last Time Shipment – LTS		Dezember 31, 2017	
4GB	Qualification samples availability		CW 50, 2016	
	4GB – Last Time Buy – LTB		March 01, 2017	
	4GB – Last Time Shipment – LTS		Dezember 31, 2017	
Recommended Action: Qualification of new products				
Reference Documents / Attachments: -				
Should you have any issues with the content of this change, please contact the representative listed below within 20 days. No response will be deemed as customer's acceptance of the change and the change will be implemented.				
Contacts	Name	Email		
Application Engineer – EMEA	Pablo Dorransoro	pablo.dorransoro@swissbit.com		
Application Engineer – NA	Roland Ochoa	roland.ochoa@swissbit.com		
Application Engineer – JP	Junji Kaneko	junji.kaneko@swissbit.com		
IMPORTANT NOTE:				
Swissbit – as a provider of industrial products – announces and informs about every change in the product hardware and firmware. We always test backwards compatibility and assure best quality, reliability and transparency for our customers. We apologize for any inconvenience caused.				

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Affected Parts:

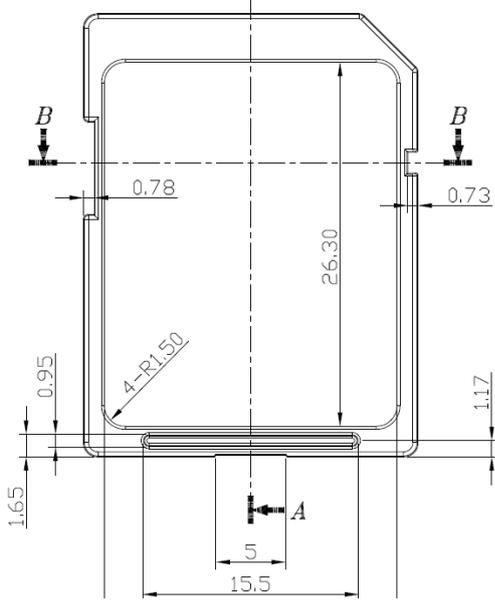
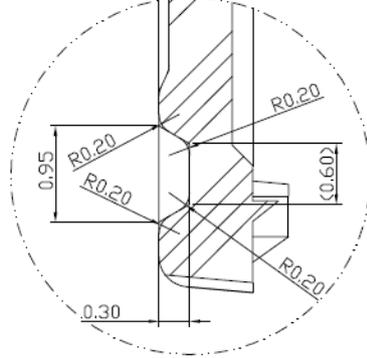
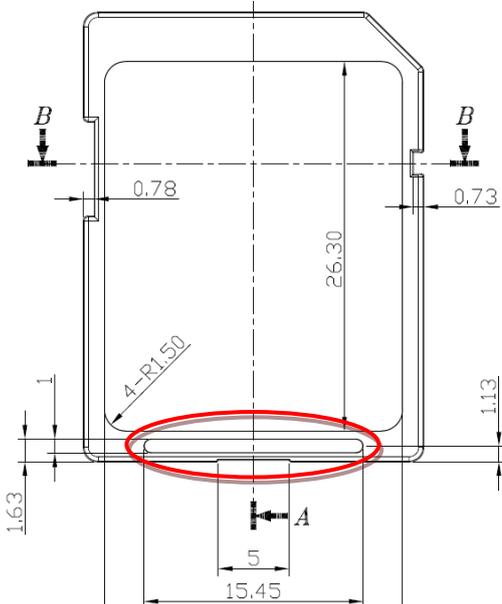
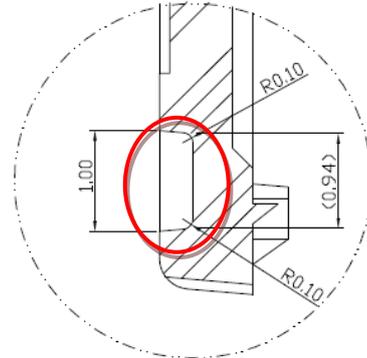
S-45	
SAP	Swissbit Part Number
605311	SFSD4096L2BM1TO-I-GE-2A1-STD
605312	SFSD4096L2BM1TO-E-GE-2A1-STD
605313	SFSD8192L2BM1TO-I-GE-2A1-STD
605314	SFSD8192L2BM1TO-E-GE-2A1-STD
605315	SFSD016GL2BM1TO-I-GE-2A1-STD
605316	SFSD016GL2BM1TO-E-GE-2A1-STD
605518	SFSD016GL2BM1TO-I-LF-2A1-STD
605317	SFSD032GL2BM1TO-I-LF-2A1-STD
605318	SFSD032GL2BM1TO-E-LF-2A1-STD
605319	SFSD064GL2BM1TO-I-HG-2A1-STD
605320	SFSD064GL2BM1TO-E-HG-2A1-STD

S-40	
SAP	Swissbit Part Number
605021	SFSD016GL2BM1TO-E-LF-111-STD
604880	SFSD016GL2BM1TO-I-LF-111-STD
604884	SFSD016GL2BM1TO-I-GE-111-STD
605300	SFSD016GL2BM1TO-E-GE-121-STD
605299	SFSD016GL2BM1TO-I-GE-121-STD
605020	SFSD032GL2BM1TO-E-LF-111-STD
604883	SFSD032GL2BM1TO-I-LF-111-STD
605302	SFSD032GL2BM1TO-E-LF-121-STD
605301	SFSD032GL2BM1TO-I-LF-121-STD
605019	SFSD064GL2BM1TO-E-HG-111-STD
604986	SFSD064GL2BM1TO-I-HG-111-STD
605304	SFSD064GL2BM1TO-E-HG-121-STD
605303	SFSD064GL2BM1TO-I-HG-121-STD
605022	SFSD4096L2BM1TO-E-GE-111-STD
605009	SFSD4096L2BM1TO-I-GE-111-STD
605296	SFSD4096L2BM1TO-E-GE-121-STD
605295	SFSD4096L2BM1TO-I-GE-121-STD
605023	SFSD8192L2BM1TO-E-GE-111-STD
604881	SFSD8192L2BM1TO-I-GE-111-STD
605298	SFSD8192L2BM1TO-E-GE-121-STD
605297	SFSD8192L2BM1TO-I-GE-121-STD

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Annex

SD Card housing

Old housing	New housing	Comment
 <p>Cavity detail (cross section):</p>  <p>Cavity depth: 0.30</p>	 <p>Cavity detail (cross section):</p>  <p>Cavity depth: 0.33</p>	<p>Larger cavity for better handling</p>
		<p>TOP view without label</p>