

PCN20027: Maximum Read Frequency on Certain LSRAM Read Modes Has Been Reduced

December 7, 2020

Description

The following LSRAM configurations have derated F_{MAX} specifications.

Table 1 • Derated F_{MAX} Specifications

Condition	Datasheet Revision 1.7		Datasheet Revision 1.8		Unit
	STD	–1	STD	–1	
Dual-port, all supported widths, non-pipelined, and read-before-write	274	285	240	285	MHz
Dual-port, all supported widths, pipelined, and read-before-write	274	285	240	285	MHz
Two-port, all supported widths, pipelined, and read-before-write	274	285	240	285	MHz
Two-port, all supported widths, non-pipelined, and read-before-write	274	285	240	285	MHz
Two-port pipelined ECC mode, pipelined, and read-before-write	274	285	240	285	MHz
Two-port non-pipelined ECC mode, pipelined, and read-before-write	274	285	198	240	MHz
Two-port pipelined ECC mode, non-pipelined, and read-before-write	274	285	240	285	MHz
Two-port non-pipelined ECC mode, non-pipelined, and read-before-write	193	285	193	240	MHz

Reason for Change

On-going QA testing and verification exposed a timing criticality in a critical path within the LSRAM.

Application Impact

Users should upgrade to Libero 12.6 and re-run static timing using SmartTime if they are using one of the above LSRAM configurations and the design is running faster than the new limits listed in the table above.

Production Shipment Schedule

This has no affect on production shipments. Libero 12.6 will contain the new LSRAM timing model.

Qualification Data

N/A

Samples Availability

N/A

Method of Identifying Changed Product

By part number.

Products Affected

PolarFire Part Numbers			
MPF100T-FCG484E	MPF100TL-FCG484E	MPF100T-1FCG484E	MPF100T-FCG484I
MPF100T-FCVG484E	MPF100TL-FCVG484E	MPF100T-1FCVG484E	MPF100T-FCVG484I
MPF100T-FCSG325E	MPF100TL-FCSG325E	MPF100T-1FCSG325E	MPF100T-FCSG325I
MPF200T-FCG484E	MPF200TL-FCG484E	MPF200T-1FCG484E	MPF200T-FCG484I
MPF200T-FCVG484E	MPF200TL-FCVG484E	MPF200T-1FCVG484E	MPF200T-FCVG484I
MPF200T-FCG784E	MPF200TL-FCG784E	MPF200T-1FCG784E	MPF200T-FCG784I
MPF200T-FCSG325E	MPF200TL-FCSG325E	MPF200T-1FCSG325E	MPF200T-FCSG325I
MPF200T-FCSG536E	MPF200TL-FCSG536E	MPF200T-1FCSG536E	MPF200T-FCSG536I
MPF300T-FCG484E	MPF300TL-FCG484E	MPF300T-1FCG484E	MPF300T-FCG484I
MPF300T-FCVG484E	MPF300TL-FCVG484E	MPF300T-1FCVG484E	MPF300T-FCVG484I
MPF300T-FCG784E	MPF300TL-FCG784E	MPF300T-1FCG784E	MPF300T-FCG784I
MPF300T-FCSG536E	MPF300TL-FCSG536E	MPF300T-1FCSG536E	MPF300T-FCSG536I
MPF300T-FCG1152E	MPF300TL-FCG1152E	MPF300T-1FCG1152E	MPF300T-FCG1152I
MPF500T-FCG784E	MPF500TL-FCG784E	MPF500T-1FCG784E	MPF500T-FCG784I
MPF500T-FCG1152E	MPF500TL-FCG1152E	MPF500T-1FCG1152E	MPF500T-FCG1152I
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MPF500TL-FCG784I	MPF500T-1FCG784I	MPF500TLS-FCG784I	MPF500TS-FCG784I
MPF500TL-FCG1152I	MPF500T-1FCG1152I	MPF500TLS-FCG1152I	MPF500TS-FCG1152I
MPF100TS-1FCG484I			
MPF100TS-1FCVG484I			
MPF100TS-1FCSG325I			
MPF200TS-1FCG484I			
MPF200TS-1FCVG484I			
MPF200TS-1FCG784I			
MPF200TS-1FCSG325I			
MPF200TS-1FCSG536I			
MPF300TS-1FCG484I			
MPF300TS-1FCVG484I			
MPF300TS-1FCG784I			
MPF300TS-1FCSG536I			
MPF300TS-1FCG1152I			
MPF500TS-1FCG784I			
MPF500TS-1FCG1152I			

Contact Information

If you have any questions about this subject, contact Microsemi Technical Support department by using the support portal at <https://soc.microsemi.com/Portal/Default.aspx>

Regards,

Microsemi Corporation

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**Microsemi**

2355 W. Chandler Blvd.
Chandler, AZ 85224 USA

Within the USA: +1 (480) 792-7200
Fax: +1 (480) 792-7277

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