

Following the acquisition of Adesto Technologies, Dialog Semiconductor offers memory products as part of its product portfolio. The existing content from datasheets, including part numbers and codes should be used. Terms of Purchase are provided on the Dialog website

<https://www.dialog-semiconductor.com/general-terms-and-conditions-purchase>

View our Dialog memory products portfolio:

[www.dialog-semiconductor.com/products/memory](http://www.dialog-semiconductor.com/products/memory)

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### High Temperature Operation (125°C)

This data sheet addendum is to be used in conjunction with the existing AT25DF041B datasheet specifications. The Adesto AT25DF041B 4Mbit Serial Flash devices will operate @ 125°C with the following datasheet caveats. All other parameters will meet the existing datasheet specifications.

The ordering code suffix (CAN# Code) 'HR' or 'HT' must be used to ensure correct operation at this extended temperature range. Adesto will not modify and republish the current datasheet to reflect the CAN# ordering code or the above caveats. The standard [AT25DF041B datasheet](http://www.adestotech.com) is available at <http://www.adestotech.com>.

## 1. Electrical Specifications

### 1.1 DC and AC Operating Range

		AT25DF041B-xxxHR
Operating Temperature		-40°C to +125°C
Endurance (Maximum)		20,000 Cycles

### 1.2 DC, AC, Program and Erase Characteristics

Symbol	Parameter	1.7V to 3.6V			2.3V to 3.6V			Units
		Min	Typ	Max	Min	Typ	Max	
I <sub>UDPD</sub>	Ultra Deep Power-Down Current		.2	1		.3	1	μA
I <sub>DPD</sub>	Deep Power-Down Current		4.5	40		5	40	μA
I <sub>SB</sub>	Standby Current		25	65		25	65	μA
f <sub>SCK</sub>	Maximum Clock Frequency for All Operation ( including 0Bh Opcode)			85			85	MHz
f <sub>RDLF</sub>	Maximum Clock Frequency for 03h			25			25	MHz
f <sub>RDDO</sub>	Maximum Clock Frequency for 3Bh Opcode			40			40	MHz
t <sub>CSH</sub>	Minimum CS - High Time	40				25		ns
t <sub>PP</sub>	Page Program Time (256 Bytes)		2	6		2	4	ms
t <sub>BLKE</sub>	Block Erase Time (4K)		45	100		45	100	ms
	Block Erase Time (32K)		250	800		250	500	ms
	Block Erase Time (64K)		450	1700		450	1000	ms
t <sub>CHPE</sub>	Chip Erase Time		3.6	12		3.6	6.8	s

## 2. Ordering Code

### 2.1 Green Package Options (Pb/Halide-free/RoHS Compliant)

Ordering Code <sup>(1)</sup>	Package	Operating Voltage	Max. Freq. (MHz)	Operation Range
AT25DF041B-SSHNHR-T	8S1	1.7V to 3.6V	85MHz	Extended (-40°C to +125°C)
AT25DF041B-SSHNHR-B				
AT25DF041B-XMHNHR-T	8X			
AT25DF041B-XMHNHR-B				
AT25DF041B-MAHNHR-T	8MA3			
AT25DF041B-DWFHT <sup>(2)</sup>	DWF			
AT25DF041B-UUNHR-T <sup>(3)</sup>	8-WLCSP			

1. The shipping carrier option code is not marked on the devices.
2. Contact Adesto for mechanical drawing or Die Sales information.
3. Contact Adesto for WLCSP availability and lead time. Handle product in accordance with UV and ESD precautions.

Package Type	
<b>8S1</b>	8-lead, 0.150" Wide, Plastic Gull Wing Small Outline Package (JEDEC SOIC)
<b>8X</b>	8-lead, Thin Shrink Small Outline Package
<b>8MA3</b>	8-pad, 2 x 3 x 0.6mm, Thermally Enhanced Plastic Ultra Thin Dual Flat No Lead Package (UDFN)
<b>DWF</b>	Die in Wafer Form
<b>8-WLCSP</b>	8-ball, 3 x 2 x 3mm Ball Matrix, 0.35mm Z-Height

## 3. Revision History

Revision Level – Release Date	History
A – January 2015	Initial release.
B – November 2015	Added WLCSP package. Corrected units specification for $I_{UDPD}$ and $t_{CSH}$ . Removed preliminary package note.
C – August 2017	Updated corporate address information.



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