



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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High Temperature Operation (125°C)

This data sheet addendum is to be used in conjunction with the existing AT25DF021A datasheet specifications. The Adesto AT25DF021A 2Mbit 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 [AT25DF021A datasheet](http://www.adestotech.com) is available at <http://www.adestotech.com>.

1. Electrical Specifications

1.1 DC and AC Operating Range

		AT25DF021A-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 _{UDPD}	Ultra Deep Power-Down Current		.2	1		.3	1	μA
I _{DPD}	Deep Power-Down Current		5	40		8	40	μA
I _{SB}	Standby Current		25	65		25	65	μA
I _{CC3} ⁽¹⁾⁽²⁾	Active Current, Program Operation		11	14.5		12	14.5	mA
I _{CC4} ⁽¹⁾⁽²⁾	Active Current, Erase Operation		11	14.5		12	14.5	mA
f _{SCK}	Maximum Clock Frequency for All Operation (including 0Bh Opcode)			85			85	MHz
f _{RDLF}	Maximum Clock Frequency for 03h			25			25	MHz
f _{RDDO}	Maximum Clock Frequency for 3Bh Opcode			40			40	MHz
t _{PP}	Page Program Time (256 Bytes)		2	6		2	5	ms
t _{PE}	Page Erase Time		6	20		6	20	ms
t _{BP}	Byte Program Time		12			12		μs
t _{BLKE}	Block Erase Time (4K)		45	100		45	100	ms
	Block Erase Time (32K)		300	700		300	700	ms
	Block Erase Time (64K)		500	1400		500	1400	ms
t _{CHPE}	Chip Erase Time		2.5	6		2.5	6	s

1. Typical values measured at 1.8V @ 25°C for the 1.7V to 3.6V range.
2. Typical values measured at 3.0V @ 25°C for the 2.3V to 3.6V range.

2. Ordering Code

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

Ordering Code ⁽¹⁾	Package	Operating Voltage	Max. Freq. (MHz)	Operation Range
AT25DF021A-SSHNHR-T	8S1	1.7V to 3.6V	85MHz	Extended (-40°C to +125°C)
AT25DF021A-SSHNHR-B				
AT25DF021A-XMHNHR-T	8X			
AT25DF021A-XMHNHR-B				
AT25DF021A-MHNHR-T	8MA1			
AT25DF021A-MHNHR-Y				
AT25DF021A-MAHNHR-T	8MA3			
AT25DF021A-DWFHT ⁽²⁾	DWF			

1. The shipping carrier option code is not marked on the devices.
2. Contact Adesto for mechanical drawing or Die Sales information.

Package Type	
8S1	8-lead, 0.150" Wide, Plastic Gull Wing Small Outline Package (JEDEC SOIC)
8X	8-lead, Thin Shrink Small Outline Package
8MA1	8-pad, 5 x 6 x 0.6mm, Thermally Enhanced Plastic Ultra Thin Dual Flat No-lead (UDFN)
8MA3	8-pad, 2 x 3 x 0.6mm, Thermally Enhanced Plastic Ultra Thin Dual Flat No Lead Package (UDFN)
DWF	Die in Wafer Form

3. Revision History

Revision Level – Release Date	History
A – January 2015	Initial release.
B – May 2015	Updated AC and DC Characteristics.
C – May 2015	Added tray option to 5x6 UDFN.
D – November 2015	Removed preliminary package note.

