AT25SF161

16-Mbit, 2.5V Minimum
SPI Serial Flash Memory with Dual-I/O and Quad-I/O Support

DATASHEET (ADDENDUM)

High Temperature Operation (125°C)

This data sheet addendum is to be used in conjunction with the existing AT25SF161 datasheet specifications. The Adesto AT25SF161 16Mbit 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# 'HR' ordering code or the above caveats.The standard AT25SF161 datasheet is available at http://www.adestotech.com.

1. Electrical and Performance Specifications

1.1 DC and AC Operating Range

		AT25SF161-xxxHR
Operating Temperature		-40°C to +125°C

1.2 DC Characteristics

Symbol	Parameter	Condition	2.5V to 3.6V			Units
			Min	Typ	Max	
I_{DPD}	Deep Power-Down Current	$\overline{CS}$, $\overline{HOLD}$, $\overline{WP}$ = V_{IH}			10 (1)	µA
I_{SB}	Standby Current	$\overline{CS}$, $\overline{HOLD}$, $\overline{WP}$ = V_{IH}			35 (2)	µA

1. Industrial temperature limit is 5µA.
2. Industrial temperature limit is 25µA.

1.3 Program and Erase Characteristics

Symbol	Parameter	2.5V to 3.6V			
		Min	Typ	Max	Units
t_{PP} (1)	Page Program Time (256 Bytes)		1.5	4	ms
t_{CHPE} (1)(2)	Chip Erase Time		12	25	sec

1. Maximum values indicate worst-case performance after 10,000 erase/program cycles.
2. Not 100% tested (value guaranteed by design and characterization).

1.4 Endurance

	AT25SF161-xxxHR
Endurance (Maximum)	10,000 cycles

1.5 Data Retention

	AT25SF161-xxxHR/
Retention (1)	

1. Represents typical value based on equivalent operation derived from Arrhenius calculations under post cycling high temperature conditions; not indicative of performance at constant device operation life at 125°C.

2. Ordering Code

2.1 Ordering Code Detail

Ordering Code (1)	Package	Operating Voltage	Max. Freq. (MHz)	Operation Range
AT25SF161-SHDHR-T	8S2	2.5V to 3.6V	85MHz	Extended (-40°C to +125°C)
AT25SF161-SHDHR-B				
AT25SF161-SSHDHR-T	8S1			
AT25SF161-SSHDHR-B				

1. The shipping carrier option code is not marked on the devices.

Package Type	
8S1	8-lead, 0.150" Wide, Plastic Gull Wing Small Outline Package (JEDEC SOIC)
8S2	8-lead, 0.208" Wide, Plastic Gull Wing Small Outline Package (EIAJ SOIC)

1. Revision History

Revision Level – Release Date	History
A – November 2015	Initial release.
B – February 2016	Removed AT25SF161-DWF-HT product option. Updated Endurance and Data Retention specifications.

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