AT25F1024A
(AT39501)
SPI EEPROM
Product Qualification

• 2325 Orchard Parkway • San Jose CA 95131 •

The AT25F1024A Serial Peripheral Interface EEPROM is fabricated on the AT39500 CMOS process. All tests were performed at Atmel's Colorado Springs Facility.

This report summarizes the product level qualification data, ESD, Latchup, and Write Endurance for the AT25F1024 SPI EEPROM. Package specific qualification data is available separately.

AT39501 Product Qualification

ESD Characterization

ORYX Model 11000 ESD Test System
Pass/Fail via Final Production Test Program: EPRO Model 142AX Tester
Quantity Tested: 3/Lot/Voltage
Device:AT24C16A

Human Body Model Testing – Mil Std 883, Method 3015
Lot Number: 3h1782

			3 Positive & 3 Negative Pulses per The Specified Pin Combinations					
							Max Passing Voltage	
Pin Name	Function	Tested As	Qty/Fail 500V	Qty/Fail 1000V	Qty/Fail 2000V	Qty/Fail 4000V	Qty/Fail	Voltage
Vcc	Power	Vcc	3/0	3/0	3/1	3/2	3/0	1000
Gnd	Ground	Gnd	3/0	3/0	3/1	3/2	3/0	1000
A0	Address	Input	3/0	3/0	3/1	3/2	3/0	1000
A1	Address	Input	3/0	3/0	3/1	3/2	3/0	1000
A2	Address	Input	3/0	3/0	3/1	3/2	3/0	1000
WP	Write Protect	Input	3/0	3/0	3/1	3/2	3/0	1000
SCL	Serial Clock Input	Input	3/0	3/0	3/1	3/2	3/0	1000
SDA	Serial Data	Input/Output	3/0	3/0	3/1	3/2	3/0	1000
Functional Test Only Failing Pin Not Identified		See Above	3/0	3/0	3/1	3/2	3/0	1000

Machine Model Testing – JEDEC Std 22A, Method 115A
Lot Number: 4g0917

			1 Positive & 1 Negative Pulse per The Specified Pin Combinations					
							Max Passing Voltage	
Pin Name	Function	Tested As	Qty/Fail 50V	Qty/Fail 100V	Qty/Fail 150V	Qty/Fail 400V	Qty/Fail	Voltage
Vcc	Power	Vcc	3/0	3/0	3/0	3/3	3/0	300
Gnd	Ground	Gnd	3/0	3/0	3/0	3/3	3/0	300
A0	Address	Input	3/0	3/0	3/0	3/3	3/0	300
A1	Address	Input	3/0	3/0	3/0	3/3	3/0	300
A2	Address	Input	3/0	3/0	3/0	3/3	3/0	300
WP	Write Protect	Input	3/0	3/0	3/0	3/3	3/0	300
SCL	Serial Clock Input	Input	3/0	3/0	3/0	3/3	3/0	300
SDA	Serial Data	Input/Output	3/0	3/0	3/0	3/3	3/0	300
Functional Test Only Failing Pin Not Identified		See Above	3/0	3/0	3/0	3/3	3/0	300

AT39501 Product Qualification

Latch-Up Characterization

Device: AT25F1024
Lot Number: Lot# 4g0917
Quantity Tested: 3 per lot
Test Method: JEDEC 78
Final Production Test Program: EPRO Model 142AX Tester @ 25C
Over Current Test Voltage Vcc = 5.0V
Maximum Applied Trigger Current = 200 mA
Maximum Applied Trigger Voltage = 7.0 V

			Max Trigger Current			Max Trigger Voltage		
Pin Name	Function	Tested As	Passing* -I (mA)	Passing* +I (mA)	Compliance Setting (V)	Passing* -V (V)	Passing* +V (V)	Compliance Setting (mA)
Vcc	Power	Vcc	---	---	---	---	7.0	250
Gnd	Ground	Gnd	---	---	---	---	---	---
CS	Chip Select	Input	200	200	7.0	---	---	---
Hold	Suspend Input	Input	200	200	7.0	---	---	---
SI	Serial Data IN	Input	200	200	7.0	---	---	---
WP	Write Protect	Input	200	200	7.0	---	---	---
SCK	Serial Clock	Input	200	200	7.0	---	---	---
SO	Serial Data OUT	Output	200	200	7.0	---	---	---

* 0 Fails for Latchup or Post Stress Functional Tests.

Write Endurance Characterization

Device: AT25F1024A
Lot Number: Lot# 4e3527
Quantity Tested: 100
Test Temperature: 25C
Vcc: 3.6 Volts
Write Mode: Page
Highest Passing Cycles: 10,000
Cycles To First Failure: NA