

I²C-Compatible (2-wire) Serial EEPROM 1-Kbit (128 x 8) or 2-Kbit (256 x 8)

DATASHEET

Features

- Low Voltage Operation
 - 1.7V ($V_{CC} = 1.7V$ to 3.6V)
- Internally Organized 128 x 8 (1K) or 256 x 8 (2K)
- I²C-Compatible (2-wire) Serial Interface
 - 100kHz Standard Mode, 1.7V to 3.6V
 - 400kHz Fast Mode, 1.7V to 3.6V
 - 1MHz Fast Mode Plus (FM+), 2.5V to 3.6V
- Schmitt Triggers, Filtered Inputs for Noise Suppression
- Bidirectional Data Transfer Protocol
- Write Protect Pin for Full Array Hardware Data Protection
- Ultra Low Active Current (1mA max) and Standby Current (0.8 μ A max)
- 8-byte Page Write Mode
 - Partial Page Writes Allowed
- Random and Sequential Read Modes
- Self-timed Write Cycle Within 5ms max
- High Reliability
 - Endurance: 1,000,000 Write Cycles
 - Data Retention: 100 Years
- Green Package Options (Lead-free/Halide-free/RoHS Compliant)
 - 8-lead SOIC, 8-lead TSSOP, 8-pad UDFN, 8-lead PDIP⁽¹⁾, 5-lead SOT23, and 8-ball VFBGA
- Die Sale Options: Wafer Form and Tape and Reel

Description

The Atmel[®] AT24C01D/02D provides 1,024/2,048 bits of Serial Electrically Erasable and Programmable Read-Only Memory (EEPROM) organized as 128/256 words of eight bits each. The device's cascadable feature allows up to eight devices to share a common 2-wire bus. These device are optimized for use in many industrial and commercial applications where low-power and low-voltage operation are essential. Both devices are available in space-saving 8-lead SOIC, 8-lead TSSOP, 8-pad UDFN, 8-lead PDIP⁽¹⁾, 5-lead SOT23, and 8-ball VFBGA packages. The entire family of packages operates from 1.7V to 3.6V.

Note: 1. Contact Atmel Sales for availability of this package.

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

10. Ordering Information

Atmel Ordering Code	Lead Finish	Package	Delivery Information		Operation Range
			Form	Quantity	
AT24C01D-SSHM-T	NiPdAu (Lead-free/Halogen-free)	8S1	Tape and Reel	4,000 per Reel	Industrial Temperature (-40°C to 85°C)
AT24C01D-SSHM-B			Bulk (Tubes)	100 per Tube	
AT24C01D-XHM-T		8X	Tape and Reel	5,000 per Reel	
AT24C01D-XHM-B			Bulk (Tubes)	100 per Tube	
AT24C01D-MAHM-T		8MA2	Tape and Reel	5,000 per Reel	
AT24C01D-MAHM-E				15,000 per Reel	
AT24C01D-PUM	Matte Tin (Lead-free/Halogen-free)	8P3	Bulk (Tubes)	50 per Tube	
AT24C01D-STUM-T		5TS1	Tape and Reel	5,000 per Reel	
AT24C01D-CUM-T	SnAgCu Ball (Lead-free/Halogen-free)	8U3-1	Tape and Reel	5,000 per Reel	
AT24C01D-WWU11M ⁽¹⁾	N/A	Wafer Sale	Note 1		
AT24C02D-SSHM-T	NiPdAu (Lead-free/Halogen-free)	8S1	Tape and Reel	4,000 per Reel	Industrial Temperature (-40°C to 85°C)
AT24C02D-SSHM-B			Bulk (Tubes)	100 per Tube	
AT24C02D-XHM-T		8X	Tape and Reel	5,000 per Reel	
AT24C02D-XHM-B			Bulk (Tubes)	100 per Tube	
AT24C02D-MAHM-T		8MA2	Tape and Reel	5,000 per Reel	
AT24C02D-MAHM-E				15,000 per Reel	
AT24C02D-PUM	Matte Tin (Lead-free/Halogen-free)	8P3	Bulk (Tubes)	50 per Tube	
AT24C02D-STUM-T		5TS1	Tape and Reel	5,000 per Reel	
AT24C02D-CUM-T	SnAgCu Ball (Lead-free/Halogen-free)	8U3-1	Tape and Reel	5,000 per Reel	
AT24C02D-WWU11M ⁽¹⁾	N/A	Wafer Sale	Note 1		

Note: 1. For wafer sales, please contact Atmel Sales.

Package Type	
8S1	8-lead, 0.15" wide, Plastic Gull Wing Small Outline (JEDEC SOIC)
8X	8-lead, 4.40mm body, Plastic Thin Shrink Small Outline Package (TSSOP)
8MA2	8-pad, 2.00mm x 3.00mm body, 0.50mm Pitch, Ultra Thin Dual Flat No Lead (UDFN)
8P3	8-lead, 0.30" wide, Plastic Dual Inline Package (PDIP)
5TS1	5-lead, 2.90mm x 1.60mm body, Plastic Thin Shrink Small Outline (SOT23)
8U3-1	8-ball, 1.50mm x 2.00mm body, 0.5mm pitch, Very thin Fine Ball Grid Array (VFBGA)

11. Part Markings

AT24C01D and AT24C02D: Package Marking Information

8-lead SOIC 	8-lead TSSOP 	8-pad UDFN 2.0 x 3.0 mm Body
8-lead PDIP 	5-lead SOT-23 	8-ball VFBGA 1.5 x 2.0 mm Body

Note 1: ● designates pin 1

Note 2: Package drawings are not to scale

Note 3: For SOT23 package with date codes before 7B, the bottom line (YMXX) is marked on the bottom side and there is no Country of Assembly (@) mark on the top line.

Catalog Number Truncation			
AT24C01D		Truncation Code ###: 01D / ##: 1D	
AT24C02D		Truncation Code ###: 02D / ##: 2D	
Date Codes			Voltages
Y = Year	M = Month	WW = Work Week of Assembly	% = Minimum Voltage
6: 2016 0: 2020	A: January	02: Week 2	M: 1.7V min
7: 2017 1: 2021	B: February	04: Week 4	
8: 2018 2: 2022	
9: 2019 3: 2023	L: December	52: Week 52	
Country of Assembly		Lot Number	Grade/Lead Finish Material
@ = Country of Assembly		AAA...A = Atmel Wafer Lot Number	H: Industrial/NiPdAu U: Industrial/Matte Tin/SnAgCu
Trace Code			Atmel Truncation
XX = Trace Code (Atmel Lot Numbers Correspond to Code) Example: AA, AB.... YZ, ZZ			AT: Atmel ATM: Atmel ATML: Atmel

12/6/16

 Package Mark Contact: DL-CSO-Assy_eng@atmel.com	TITLE	DRAWING NO.	REV.
	24C01-02DSM, AT24C01D and AT24C02D Package Marking Information	24C01-02DSM	E