

ATOVP1
Over Voltage Protection
Controller

Datasheet

Release Date: Jan. 2005

Revision: 1.1

Revision History

Version	Date	Changes from Last Version
1.01	2002.March	1. Modified pin name, - from OVP_SET to OVP_SET1 - from CRT_IN to OVP_SET2
1.02	2002.September	1. Add OVP_SET value,p3 - The trigger value of OVP_SET1 is over 1.08 - The trigger value of OVP_SET2 is over 0.92
1.03	2002.September	1. Modify OVP_SET value,p3 - The trigger value of OVP_SET2 is over 0.97 2. Add Part 5: Testing Report, See Page 4-5.
1.04	Feb/27/2003	1. Modify function of pin description "pin 5 : OVP_SET2" - from "over 0.92V" to "over 0.97V"
1.05	May/30/2003	1.Modify function of pin description "pin 5 : OVP_SET2" - from "over 0.97V" to "over 1.02V"
1.06	Apr/02/2004	Add version description on top side mark, See Marking Information.
1.1	Jan/25/2005	Add "Ordering Information" about green device description



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1. General Description

ATOVP1 is a system Over Voltage Protection (OVP) device. When the monitored voltage reaches the trigger voltage/value (OVP event occurred), the protection mechanism is activated; PSON_OUT is pulled up to shut the system power down, OVP_OUT is pulled up to protect system CPU, and Siren/LED is turned on to alert users. ATOVP1 provides two sets of voltage input to activate this protection mechanism. When any OVP events occur, system can use this input preventing from catastrophe .

2. Features

- Over Voltage Protection:
 - Shut down Power Supply
 - Pull down Vcore
 - Send a Alert signal (Siren/LED) to inform users
- Support 2 sets of voltage monitoring mechanism.
- OVP event flag latched until AC power loss or power down
- OVP trigger voltage adjustable by external resister
- Real time monitoring and reacting
- Package: SOP 8-Pin

3. Pin Configuration

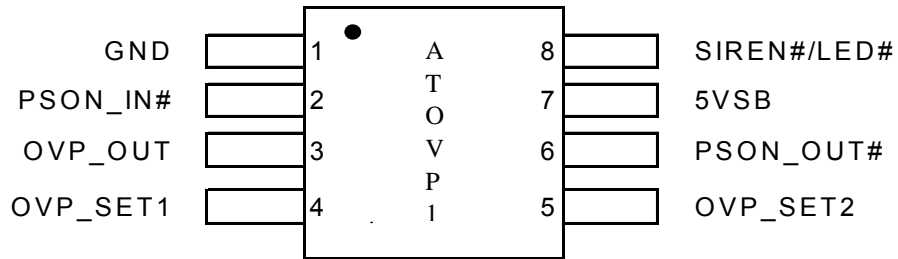


Figure 1. ATOVP1 Pin Diagram (Top View)

Ordering Information

ATOVP1- Commercial Standard

ATOVP1G- Green Device with Commercial Standard

4. Pin Description

Pin Type Description

OD₁₂ – Open-drain with 12mA sink current

INT – TTL level input

INa –Analog input

Pin No.	Pin name	I/O Type	Function
1	VSS	Ground	Ground Pin
2	PSON_IN#	INT	PSON input
3	OVP_OUT	OD ₁₂	Open drain high when OVP Event occurs
4	OVP_SET1	INa	OVP trigger voltage input, active high (Over 1.08V ± 5%)
5	OVP_SET2	INa	OVP trigger voltage input, active high (Over 1.02V± 5%)
6	PSON_OUT#	OD ₁₂	System power shut down control output pin, active high when Over Voltage Event occurs
7	5VSB	Power	5V Stand-By Power input
8	Siren#	OD ₁₂	Send siren signal when Over Voltage Event occurs, default OD high

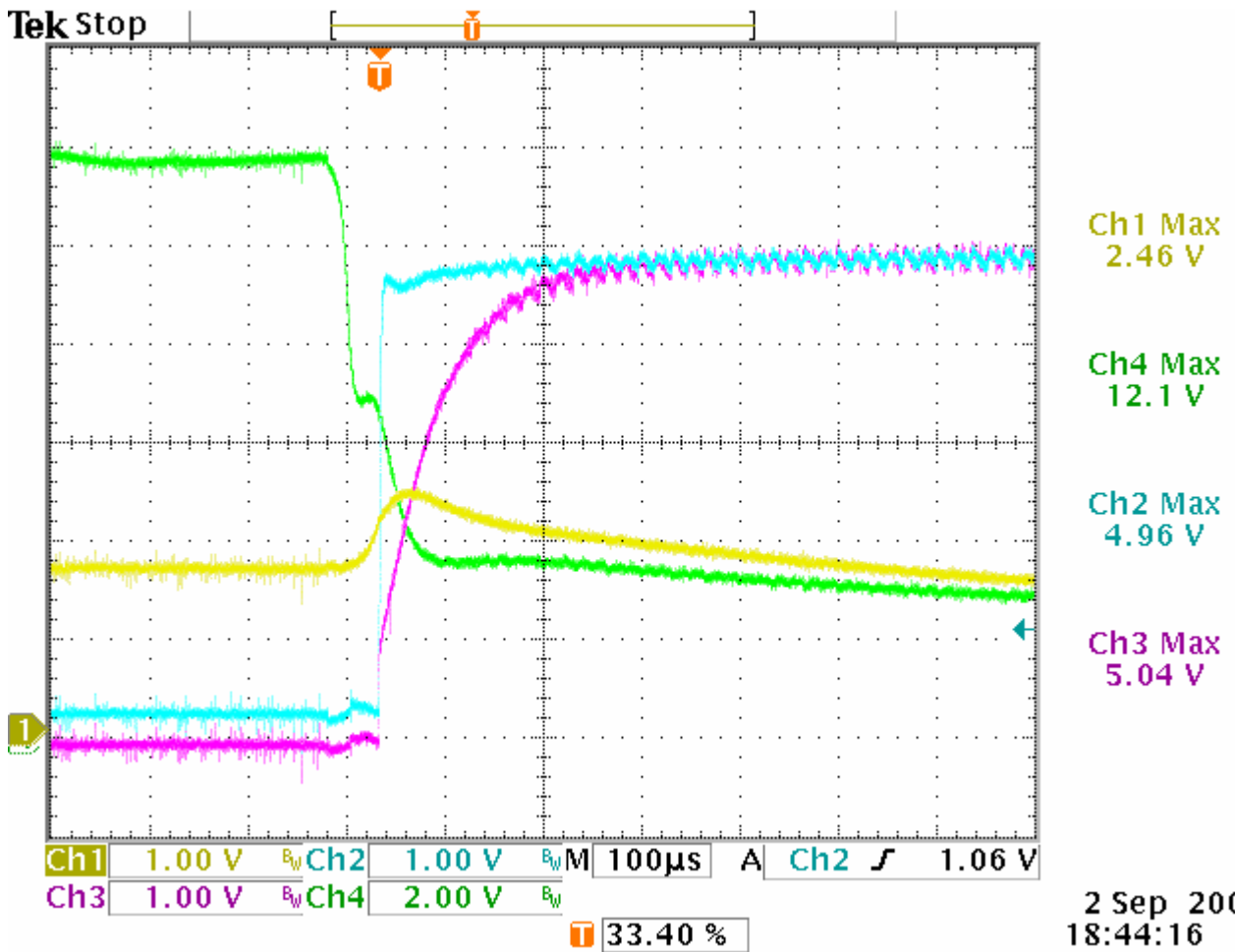
Table 1. ATOVP1 Pin Description

5. ATOVP1 Testing Report

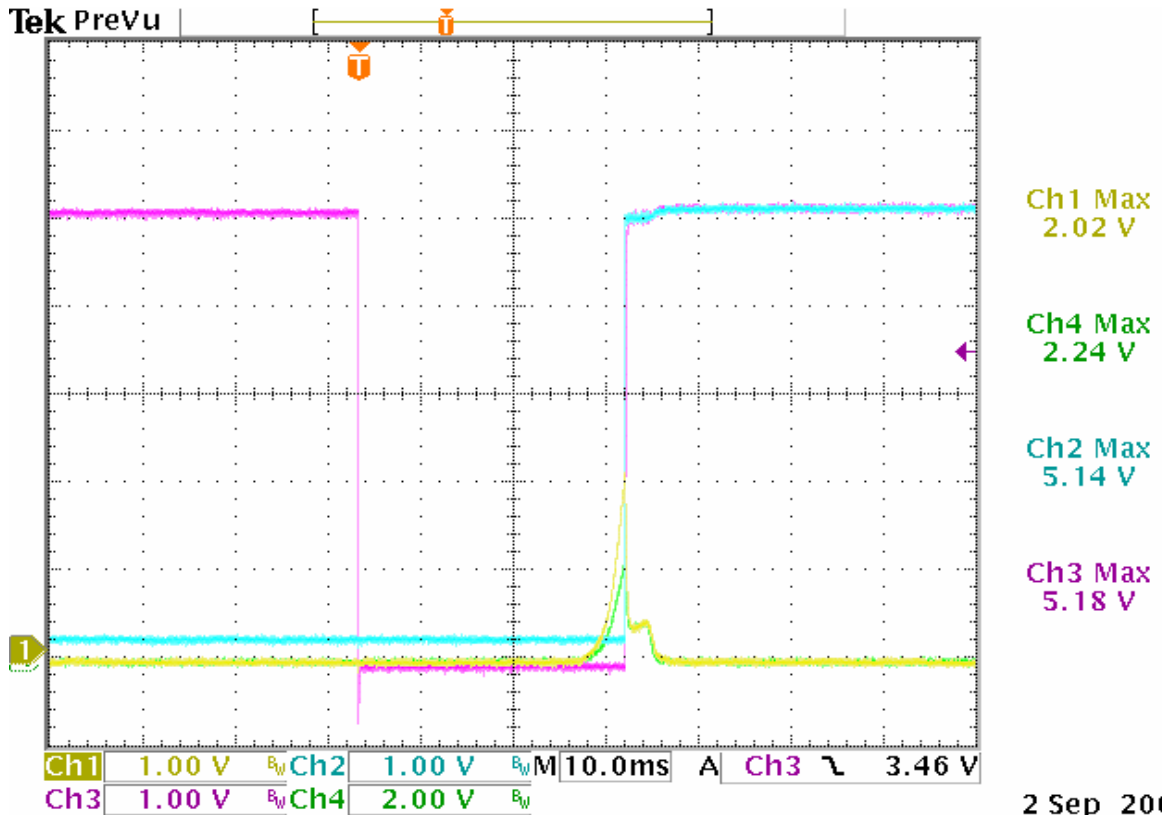
Condition : VID set 1.75V
OVP set 2V

Channel 1 : Vcore
Channel 2 : OVP MOSFET gate pin
Channel 3 : ATX power PS_ON pin
Channel 4 : +12V

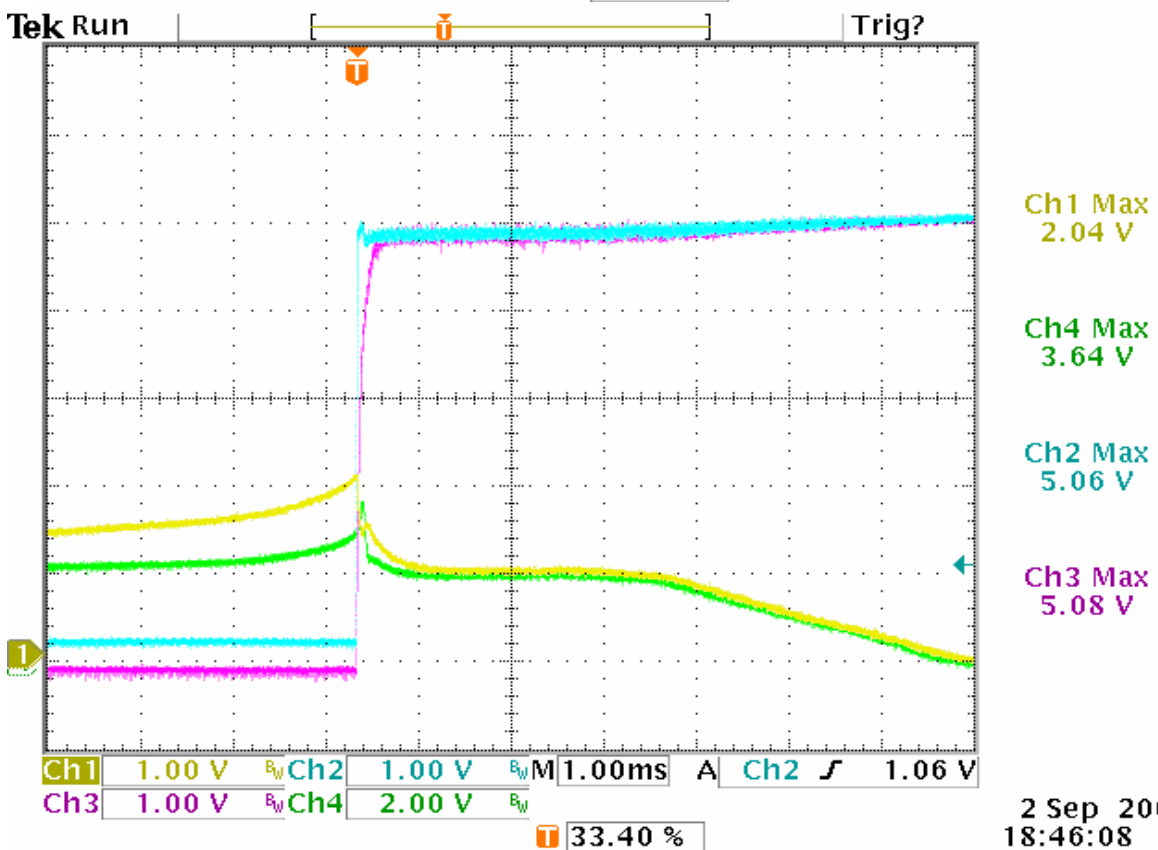
1. Turn on power supply, then short high side MOSFET D-S



2. Short high side MOSFET D-S, then turn on power supply

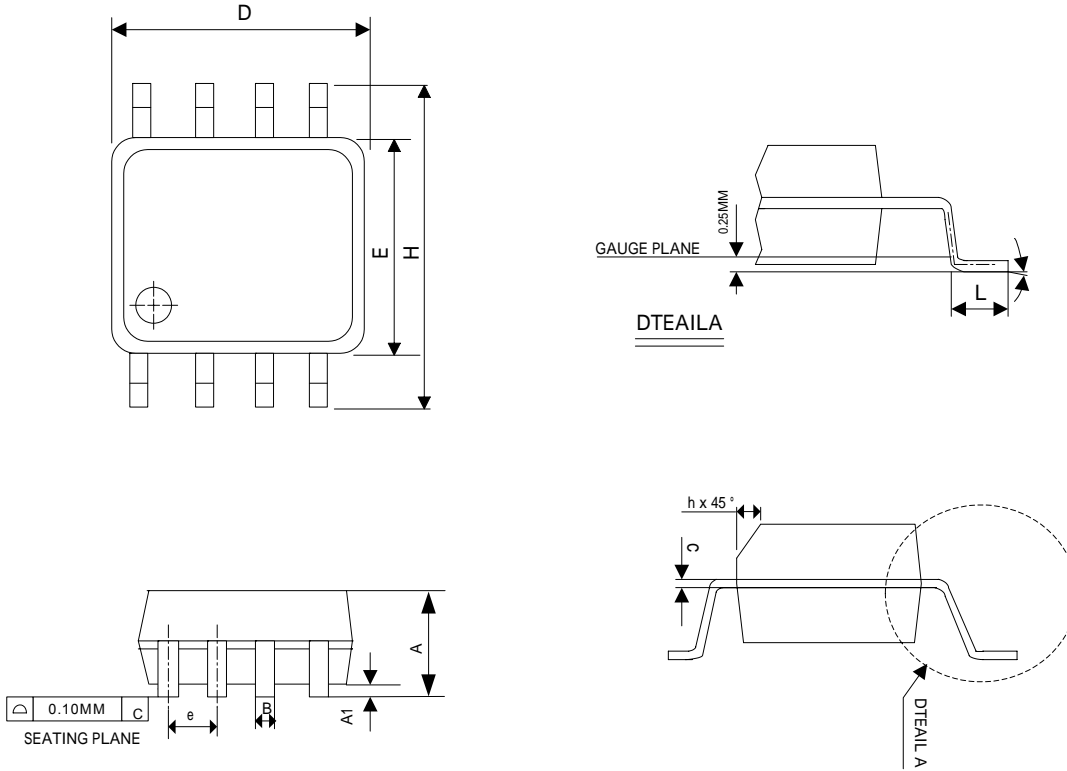


2 Sep 2002
18:52:29



2 Sep 2002
18:46:08

6. Package Information SOP8pin Outline Dimension



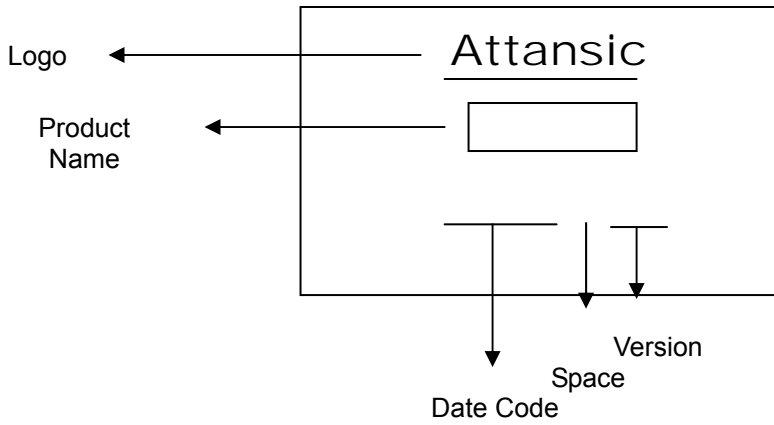
Symbol	Dimension in mm		Dimension in inch	
	Min	Max	Min	Max
A	1.35	1.75	0.0532	0.0688
A1	0.10	0.25	0.0040	0.0098
B	0.33	0.51	0.013	0.020
C	0.19	0.25	0.0075	0.0098
e	1.27BSC		0.050BSC	
D	4.80	5.00	0.1890	0.1968
H	5.80	6.20	0.2284	0.2440
E	3.80	4.00	0.1497	0.1574
L	0.40	1.27	0.016	0.050
h	0.25	0.50	0.0099	0.0196
θ	0°	8°	0°	8°
JEDEC	MS-012 (AA)			

*NOTES: DIMENSION "D" DOES NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

MOLD FLASH, PROTRUSIONS AND GATE BURRS SHALL NOT EXCEED 0.15 MM (0.006 INCH) PER SIDE.

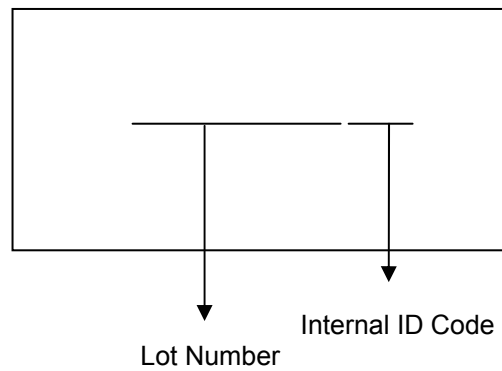
7. Marking Information

Top Side View



Back Side View

Internal ID Code:
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