



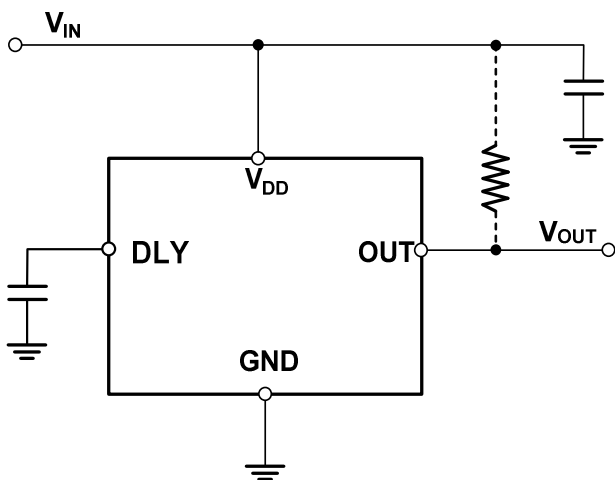
Product information presenting is current as of publication date. Details are subject to change without notice.

# HIGH-PRECISION RESET VOLTAGE DETECTOR

## FEATURES

- Low Current Consumption (3μA typical, V<sub>DD</sub> = 3V)
- High-Precision Reset Voltage ±2%
- Hysteresis Voltage 5% Typical
- Reset Voltage 1.8V to 5.5V
- Fixed or Adjustable Delay Time
- Open Drain or Push-Pull Output
- External Delay Time
- SC82AB (SOT343), SOT23-5 (SOT25)  
Package Available

## APPLICATION



## GENERAL DESCRIPTION

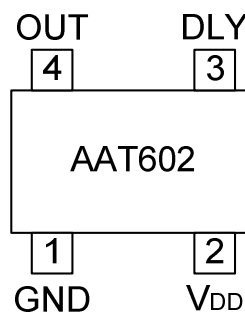
The AAT602 is a reset voltage detector that provides a high-precision output signal, which allows users to initiate or reset the system.

The detection voltage with an accuracy of ±2% is trimmed to customized specification. Delay time can be adjusted by an external capacitor. And output signal may be configured as either open drain or push-pull.

With minimal external components required, the AAT602 offers a simple and economical solution.

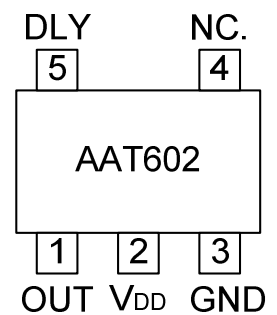
## PIN CONFIGURATION

TOP VIEW



SC82AB (SOT343)

TOP VIEW



SOT23-5 (SOT25)



**AAT602**

**ORDERING INFORMATION**

DEVICE TYPE	PART NUMBER	PACKAGE	PACKING	TEMP. RANGE	MARKING DESCRIPTION
AAT602	AAT602XXA-S5-T	S5:SOT 23-5 (SOT25)	T: Tape and reel	-20 °C to+85 °C	
AAT602	AAT602XXB-S5-T	S5:SOT 23-5 (SOT25)	T: Tape and reel	-20 °C to+85 °C	
AAT602	AAT602XXA-S15-T	S15: SC 82AB	T: Tape and reel	-20 °C to+85 °C	
AAT602	AAT602XXB-S15-T	S15: SC 82AB	T: Tape and reel	-20 °C to+85 °C	

NOTE1: All AAT products are lead free and halogen free

**ABSOLUTE MAXIMUM RATINGS**

PARAMETER	SYMBOL	VALUE	UNIT
V <sub>DD</sub> , OUT to GND	V <sub>DD</sub>	7	V
Input Voltage (DLY)	V <sub>I</sub>	V <sub>DD</sub> +0.3	V
Operating Free-Air Temperature Range	T <sub>C</sub>	-20 °C to +85 °C	°C
Storage Temperature Range	T <sub>storage</sub>	-45 °C to +125 °C	°C
Maximum Junction Temperature	T <sub>J</sub>	+125	°C
Package Thermal Resistance · SC82AB	θ <sub>JA</sub>	333	°C/W
Package Thermal Resistance · SOT23-5	θ <sub>JA</sub>	275	°C/W
Power Dissipation · @ T <sub>C</sub> =25 °C · SC82AB	P <sub>d</sub>	300	mW
Power Dissipation · @ T <sub>C</sub> =25 °C · SOT23-5	P <sub>d</sub>	364	mW



## ELECTRICAL CHARACTERISTICS

(T<sub>C</sub> = 25 °C)

### Recommended Operating Conditions

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Detection Voltage	V <sub>DET</sub>		V <sub>DET</sub> -2%		V <sub>DET</sub> +2%	V
Hysteresis Voltage	V <sub>HYS</sub>		V <sub>DET</sub> x3%	V <sub>DET</sub> x5%	V <sub>DET</sub> x8%	V
Supply Current	I <sub>DD</sub>	V <sub>DD</sub> =3V		3	5	μA
Operating Voltage	V <sub>OP</sub>		0.9		5.5	V
Open Drain Leakage Current	I <sub>L</sub>	V <sub>DD</sub> = 5.5V, V <sub>OUT</sub> = 5.5V			0.1	μA
Push-Pull Output Voltage	V <sub>OL</sub>	I <sub>OUT</sub> = 1.2mA			0.2	V
	V <sub>OH</sub>	I <sub>OUT</sub> = -1.2 mA	V <sub>DD</sub> -0.2 V			V
External Delay Time	t <sub>D</sub>	V <sub>DD</sub> = V <sub>DET</sub> -0.3 V	250	320	390	ms

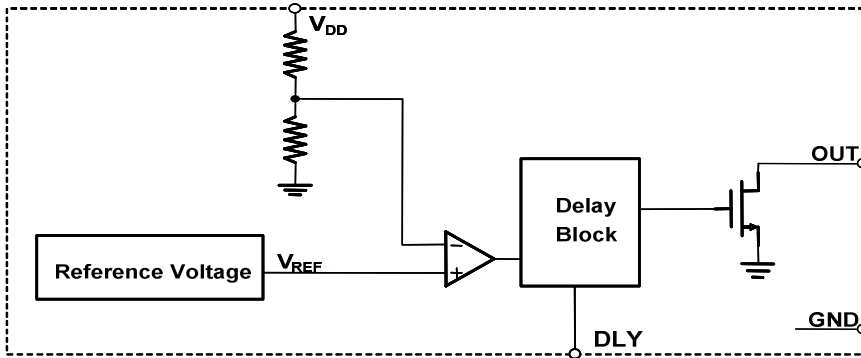
## PIN DESCRIPTION

PIN NO.		NAME	I/O	DESCRIPTION
SC82AB (SOT343)	SOT23-5 (SOT25)			
1	3	GND	-	Ground
2	2	V <sub>DD</sub>	-	Power Input / Detection Voltage
3	5	DLY	I	Delay Capacitor Connection Pin
4	1	OUT	O	Open Drain or Push-Pull Output

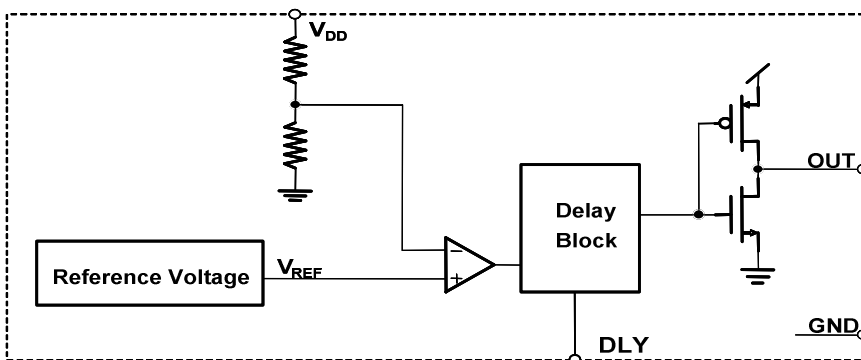


# FUNCTION BLOCK DIAGRAM

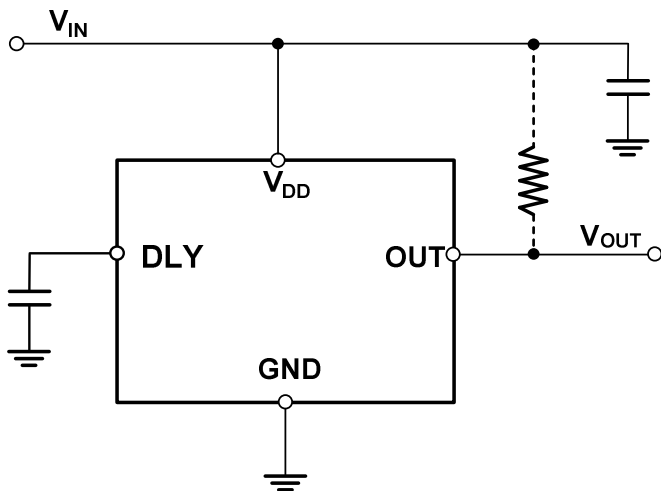
## OPEN DRAIN



## PUSH-PULL



# TYPICAL APPLICATION CIRCUIT



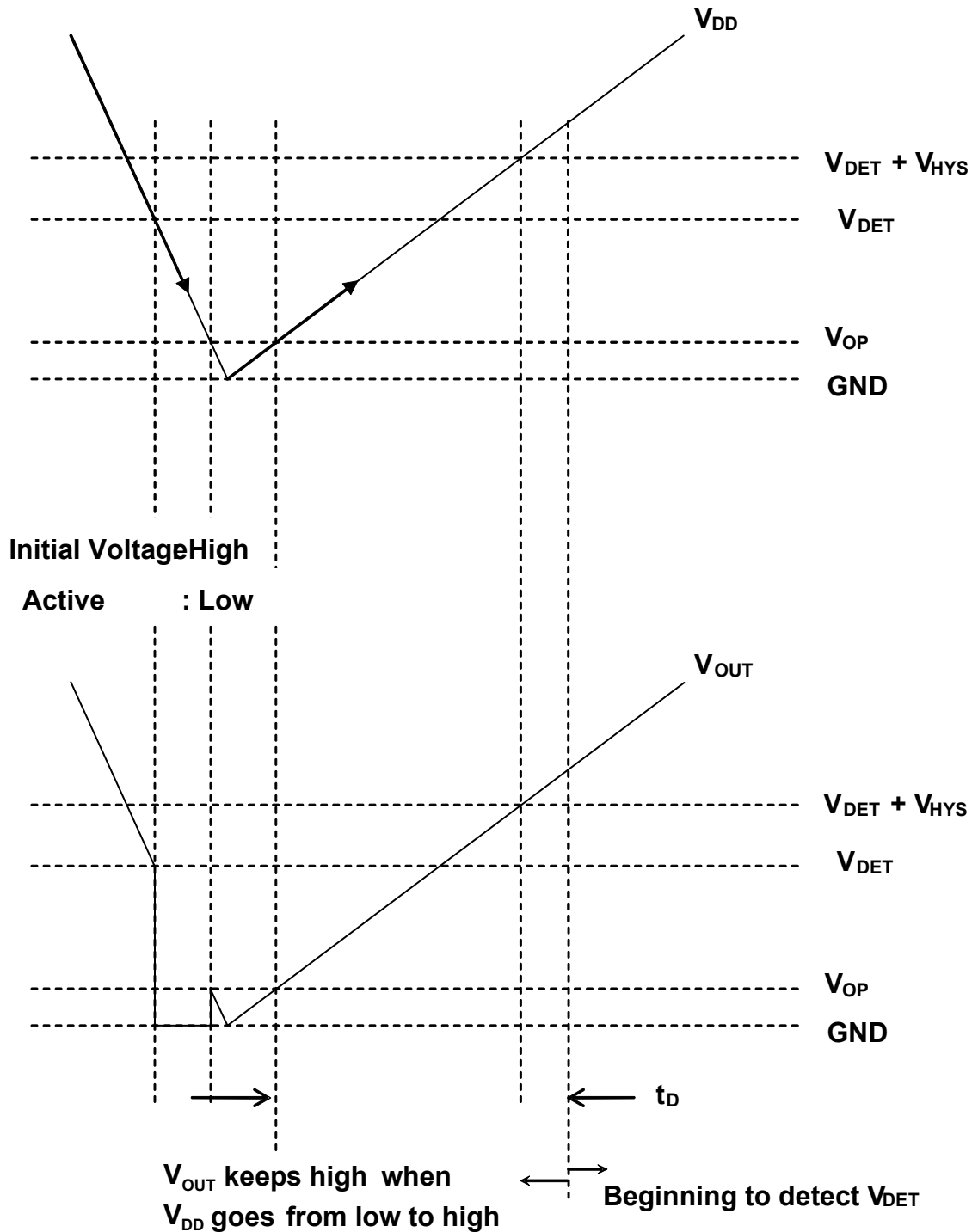


**PART NUMBER AVAILABLE**

AAT60218A	AAT60233A	AAT60248A
AAT60218B	AAT60233B	AAT60248B
AAT60219A	AAT60234A	AAT60249A
AAT60219B	AAT60234B	AAT60249B
AAT60220A	AAT60235A	AAT60250A
AAT60220B	AAT60235B	AAT60250B
AAT60221A	AAT60236A	AAT60251A
AAT60221B	AAT60236B	AAT60251B
AAT60222A	AAT60237A	AAT60252A
AAT60222B	AAT60237B	AAT60252B
AAT60223A	AAT60238A	AAT60253A
AAT60223B	AAT60238B	AAT60253B
AAT60224A	AAT60239A	AAT60254A
AAT60224B	AAT60239B	AAT60254B
AAT60225A	AAT60240A	AAT60255A
AAT60225B	AAT60240B	AAT60255B
AAT60226A	AAT60241A	
AAT60226B	AAT60241B	
AAT60227A	AAT60242A	
AAT60227B	AAT60242B	
AAT60228A	AAT60243A	
AAT60228B	AAT60243B	
AAT60229A	AAT60244A	
AAT60229B	AAT60244B	
AAT60230A	AAT60245A	
AAT60230B	AAT60245B	
AAT60231A	AAT60246A	
AAT60231B	AAT60246B	
AAT60232A	AAT60247A	
AAT60232B	AAT60247B	



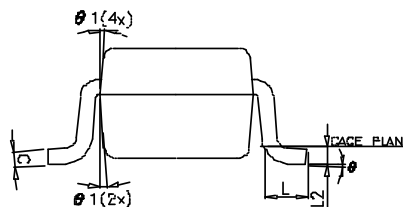
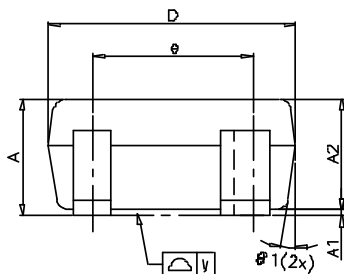
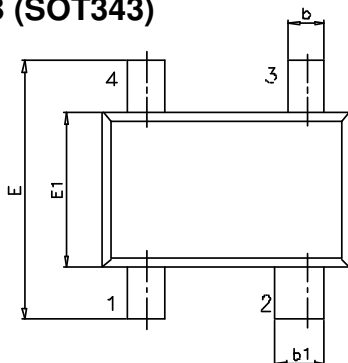
# TIMING CHART





# PACKAGE DIMENSION

## SC82AB (SOT343)

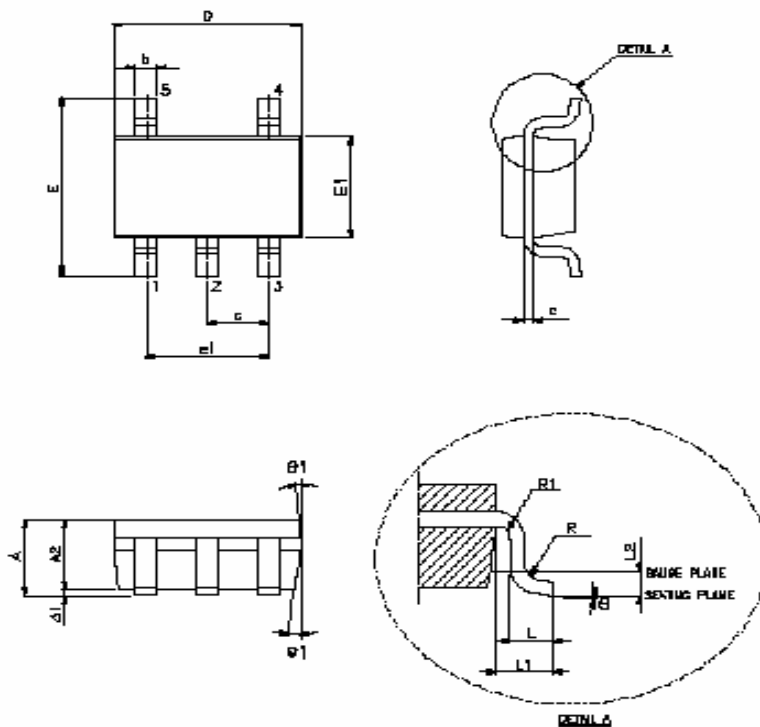


Symbol	Dimensions In Millimeters		
	MIN	TYP	MAX
A	0.8	-----	1.1
A1	0.0	-----	0.1
A2	0.7	0.9	1.0
b	0.25	0.30	0.40
b1	0.35	0.40	0.50
c	0.10	-----	0.26
D	1.8	2.0	2.2
E1	1.15	1.25	1.35
E	1.8	2.1	2.4
e	1.30 BSC		
L	0.26	0.36	0.46
L2	0.15 BSC		
y	-----	-----	0.1
θ	0°	-----	8°
θ1	4°	-----	12°



# PACKAGE DIMENSION

SOT23-5 (SOT25)



Symbol	Dimensions In Millimeters		
	MIN	TYP	MAX
A	1.05	1.2	1.3
A1	-----	-----	0.15
A2	1	1.1	1.15
b	0.3	-----	0.5
c	0.08	-----	0.22
D	2.90 BSC		
E	2.80 BSC		
E1	1.60 BSC		
e	0.95 BSC		
e1	1.90 BSC		
L	0.30	0.45	0.60
L1	0.60 REF		
L2	0.25 BSC		
R	0.1	-----	-----
R1	0.10	-----	0.25
θ	0°	4°	8°
θ1	5°	10°	15°