



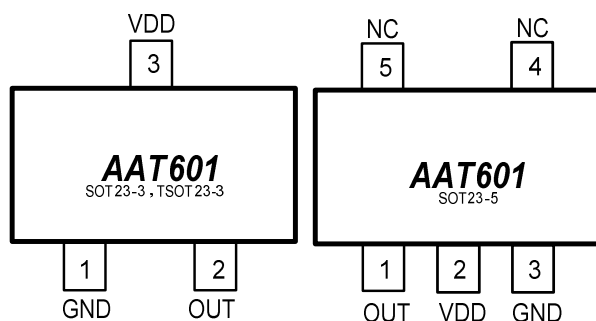
Product information presenting is current as of publication date. Details are subject to change without notice

HIGH-PRECISION RESET VOLTAGE DETECTOR

FEATURES

- **Low Current Consumption**
(3 μ A Typical, $V_{DD} = 3V$)
- **High-Precision Reset Voltage $\pm 2\%$**
- **Hysteresis Voltage Typical 5%**
- **Reset Voltage 1.8V to 5.5V**
- **Fixed or Adjustable Delay Time**
- **Open Drain or Push-Pull Output**
- **Internal Delay Time**
- **SOT23-3, TSOT 23-3, SOT23-5 Package Available**

PIN CONFIGURATION



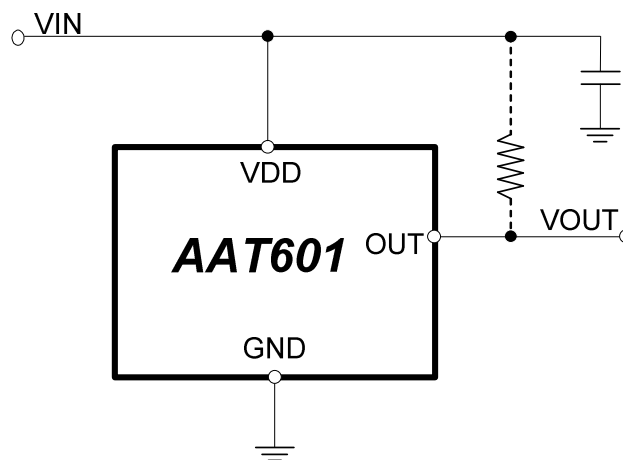
GENERAL DESCRIPTION

The AAT601 is a reset voltage detector that provides a high-precision output signal via which the user may be able to initiate or reset the system.

The detection voltage with an accuracy of $\pm 2\%$ is trimmed to the customer's specification. Delay time is fixed by internal counter. The output signal may be configured as either open drain or push-pull.

With minimal external components, the AAT601 offers a simple and economical solution to initiate or reset the system.

TYPICAL APPLICATION





ORDERING INFORMATION

DEVICE TYPE	PART NUMBER	PACKAGE	PACKING	TEMP. RANGE	MARKING DESCRIPTION
AAT601	AAT601XX A-S2-T	S2: SOT23-3 (SOT23)	T: Tape and Reel	-20 °C to +85 °C	<p>AAT601XX X</p> <p>Marking</p> <p>Output Driver Option A: Open Drain Active High B: Push-Pull Active High C: Open Drain Active Low D: Push-Pull Active Low</p> <p>Detection Voltage (VDET*10)</p> <p>Pin 1 dot</p> <p>Tracing Code Character: A-Z, 2-9 (34 Characters) Ex: Lot 1 = AA, Lot 2 = AB, ... Lot 34 = A9, Lot 35 = BA,</p>
AAT601	AAT601XX B-S2-T	S2: SOT23-3 (SOT23)	T: Tape and Reel	-20 °C to +85 °C	
AAT601	AAT601XX A-S14-T	S14: TSOT23-3 (TSOT23)	T: Tape and Reel	-20 °C to +85 °C	
AAT601	AAT601XX B-S14-T	S14: TSOT23-3 (TSOT23)	T: Tape and Reel	-20 °C to +85 °C	
AAT601	AAT601XX A-S5-T	S5: SOT23-5 (SOT25)	T: Tape and Reel	-20 °C to +85 °C	
AAT601	AAT601XX B-S5-T	S5: SOT23-5 (SOT25)	T: Tape and Reel	-20 °C to +85 °C	

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
VDD, OUT to GND	V _{DD}	7	V
Operating Free-Air Temperature Range	T _C	-20 °C to +85 °C	°C
Storage Temperature Range	T _{STORAGE}	-45 °C to +125 °C	°C
Maximum Junction Temperature	T _J	+125	°C
Package Thermal Resistance, SOT23-3	θ _{JA}	275	°C/W
Package Thermal Resistance, SOT23-5	θ _{JA}	275	°C/W
Package Thermal Resistance, TSOT23-3	θ _{JA}	275	°C/W
Power Dissipation, @ T _C = 25 °C, SOT23-3	P _d	364	m/W
Power Dissipation, @ T _C = 25 °C, SOT23-5	P _d	364	m/W
Power Dissipation, @ T _C = 25 °C, TSOT23-3	P _d	364	m/W



ELECTRICAL CHARACTERISTICS

(T_C = 25 °C)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Detection Voltage	V _{DET}		V _{DET} -2%		V _{DET} +2%	V
Hysteresis Voltage	V _{HYS}		V _{DET} ×3%	V _{DET} ×5%	V _{DET} ×8%	V
Supply Current	I _{DD}	V _{DD} = 3V		3	5	μA
Operating Voltage	V _{OP}		0.9		5.5	V
Open Drain Leakage Current	I _{L(Active High)}	V _{DD} = 1.7V, V _{OUT} = 5.5V			0.1	μA
	I _{L(Active Low)}	V _{DD} = 5.5V, V _{OUT} = 5.5V			0.1	μA
Push-Pull Output Voltage	V _{OL}	I _{OUT} = 1.2mA			0.2	V
	V _{OH}	I _{OUT} = -1.2mA	V _{DD} -0.2V			V
Internal Delay Time	t _D	V _{DD} = V _{DET} -0.3V	125	180	235	ms

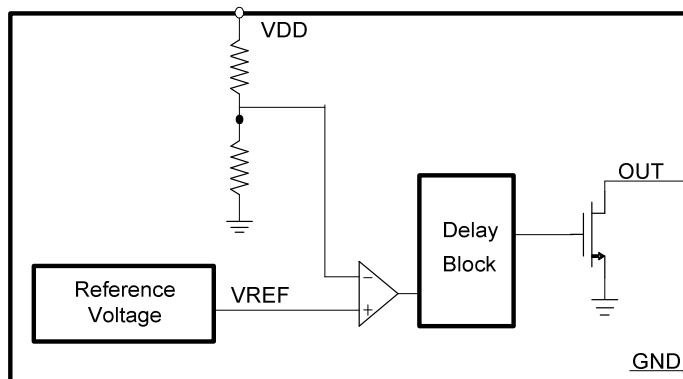
PIN DESCRIPTION

PIN NO.			NAME	I/O	DESCRIPTION
SOT23-3	TSOT23-3	SOT23-5			
1	1	3	GND	-	Ground
3	3	2	VDD	-	Power Input / Detection Voltage
2	2	1	OUT	O	Open Drain or Push-Pull Output

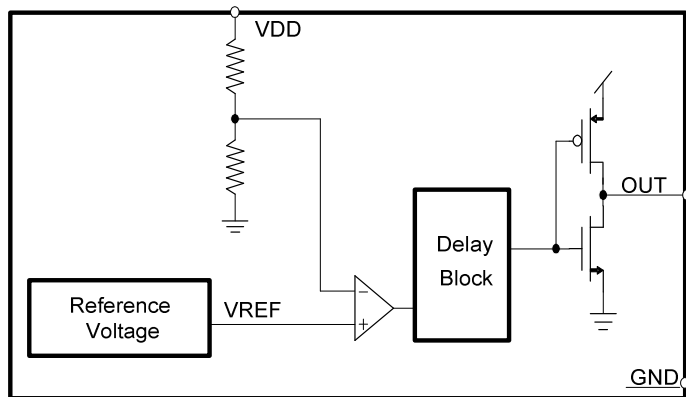


FUNCTION BLOCK DIAGRAM

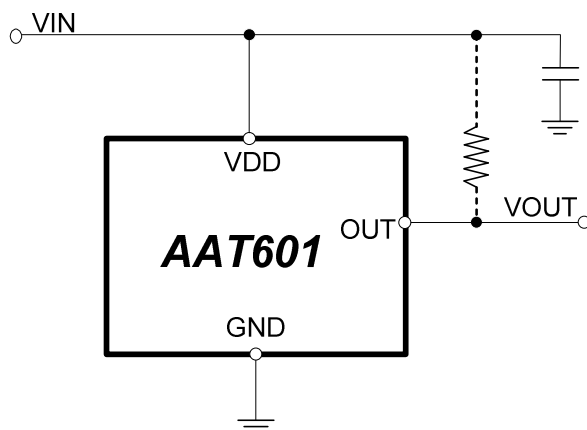
Open Drain



Push-Pull



TYPICAL APPLICATION CIRCUIT



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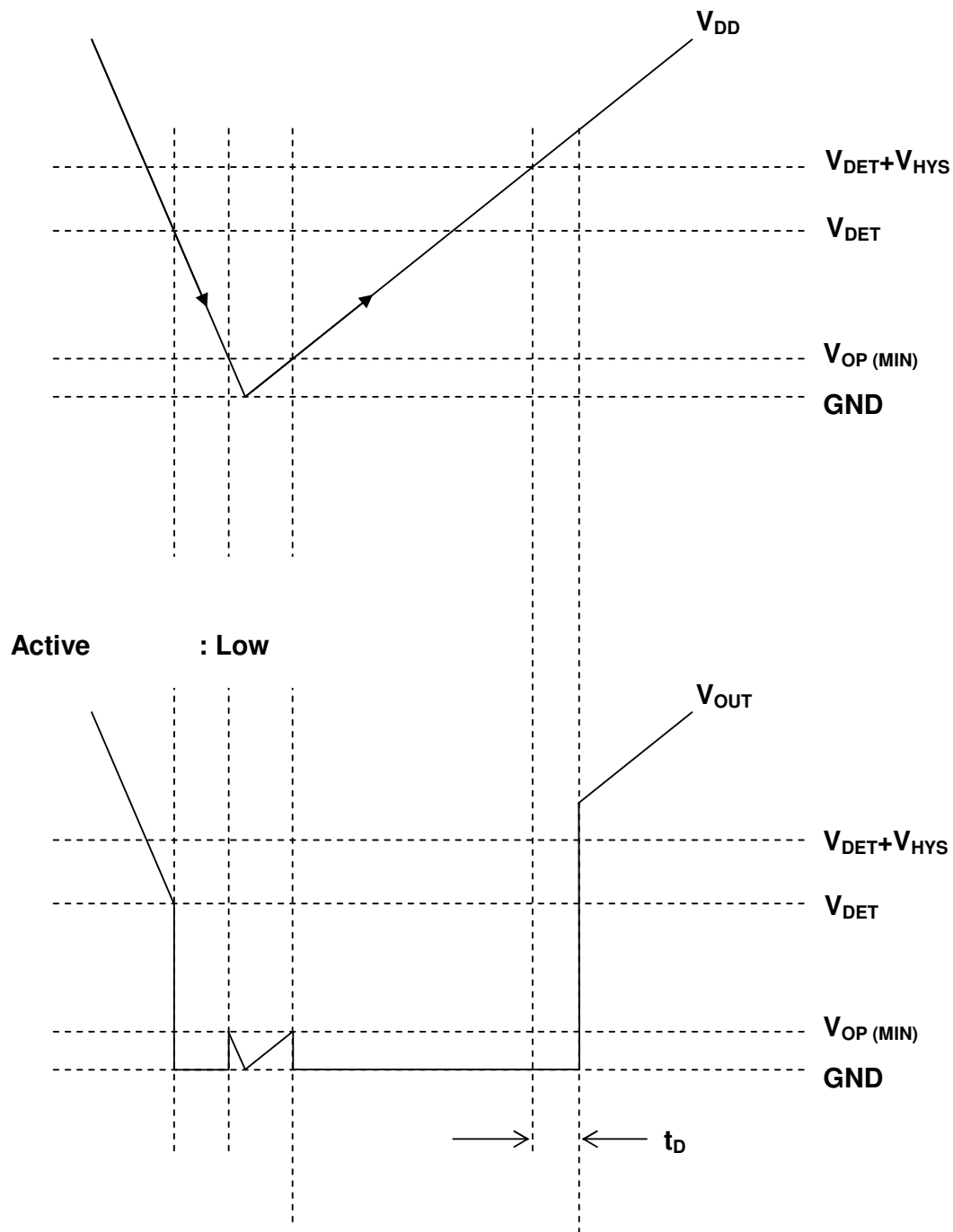
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**PART NUMBER AVAILABLE**

AAT60118A	AAT60125C	AAT60133A	AAT60140C	AAT60148A	AAT60155C
AAT60118B	AAT60125D	AAT60133B	AAT60140D	AAT60148B	AAT60155D
AAT60118C	AAT60126A	AAT60133C	AAT60141A	AAT60148C	
AAT60118D	AAT60126B	AAT60133D	AAT60141B	AAT60148D	
AAT60119A	AAT60126C	AAT60134A	AAT60141C	AAT60149A	
AAT60119B	AAT60126D	AAT60134B	AAT60141D	AAT60149B	
AAT60119C	AAT60127A	AAT60134C	AAT60142A	AAT60149C	
AAT60119D	AAT60127B	AAT60134D	AAT60142B	AAT60149D	
AAT60120A	AAT60127C	AAT60135A	AAT60142C	AAT60150A	
AAT60120B	AAT60127D	AAT60135B	AAT60142D	AAT60150B	
AAT60120C	AAT60128A	AAT60135C	AAT60143A	AAT60150C	
AAT60120D	AAT60128B	AAT60135D	AAT60143B	AAT60150D	
AAT60121A	AAT60128C	AAT60136A	AAT60143C	AAT60151A	
AAT60121B	AAT60128D	AAT60136B	AAT60143D	AAT60151B	
AAT60121C	AAT60129A	AAT60136C	AAT60144A	AAT60151C	
AAT60121D	AAT60129B	AAT60136D	AAT60144B	AAT60151D	
AAT60122A	AAT60129C	AAT60137A	AAT60144C	AAT60152A	
AAT60122B	AAT60129D	AAT60137B	AAT60144D	AAT60152B	
AAT60122C	AAT60130A	AAT60137C	AAT60145A	AAT60152C	
AAT60122D	AAT60130B	AAT60137D	AAT60145B	AAT60152D	
AAT60123A	AAT60130C	AAT60138A	AAT60145C	AAT60153A	
AAT60123B	AAT60130D	AAT60138B	AAT60145D	AAT60153B	
AAT60123C	AAT60131A	AAT60138C	AAT60146A	AAT60153C	
AAT60123D	AAT60131B	AAT60138D	AAT60146B	AAT60153D	
AAT60124A	AAT60131C	AAT60139A	AAT60146C	AAT60154A	
AAT60124B	AAT60131D	AAT60139B	AAT60146D	AAT60154B	
AAT60124C	AAT60132A	AAT60139C	AAT60147A	AAT60154C	
AAT60124D	AAT60132B	AAT60139D	AAT60147B	AAT60154D	
AAT60125A	AAT60132C	AAT60140A	AAT60147C	AAT60155A	
AAT60125B	AAT60132D	AAT60140B	AAT60147D	AAT60155B	

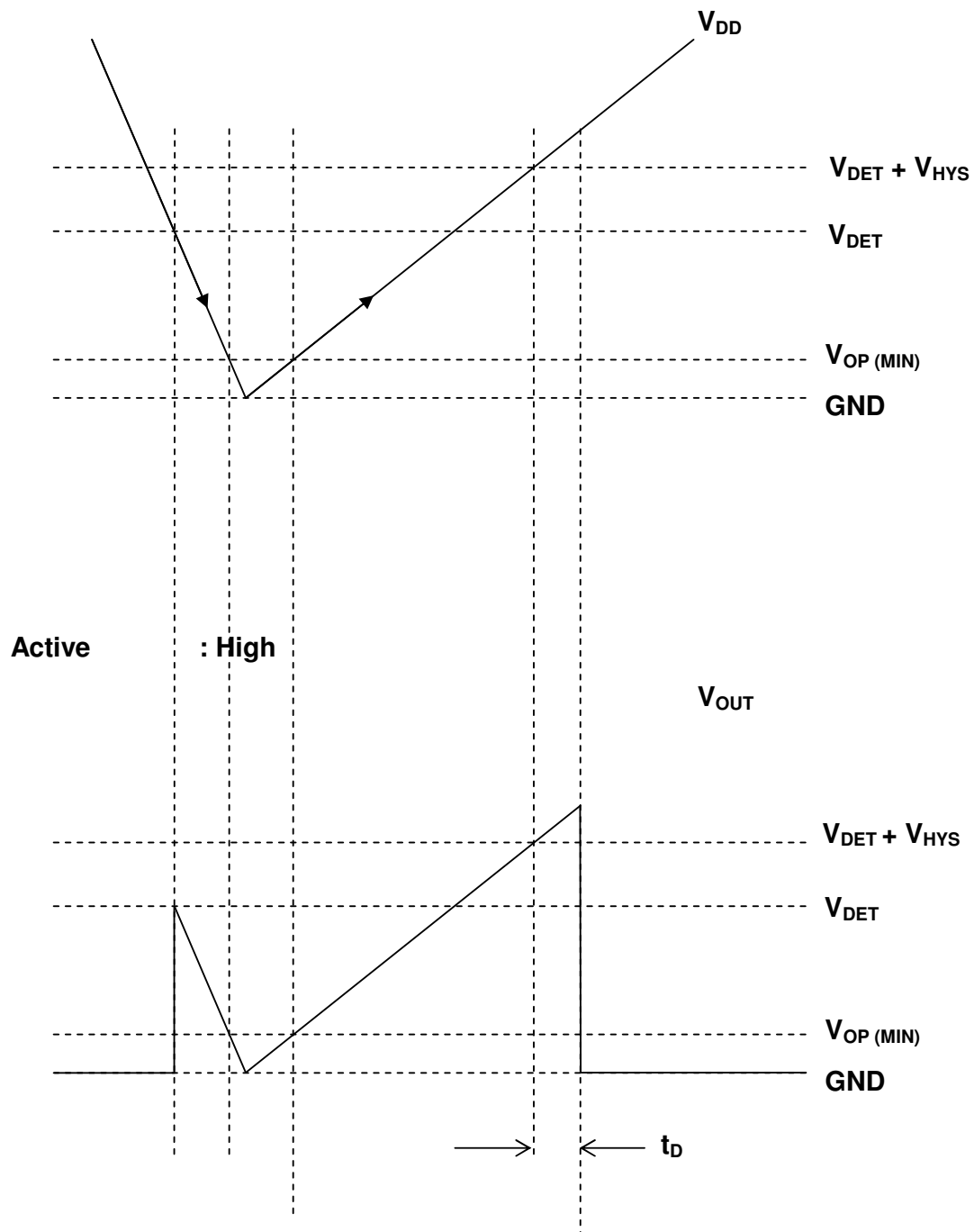


TIMING CHART





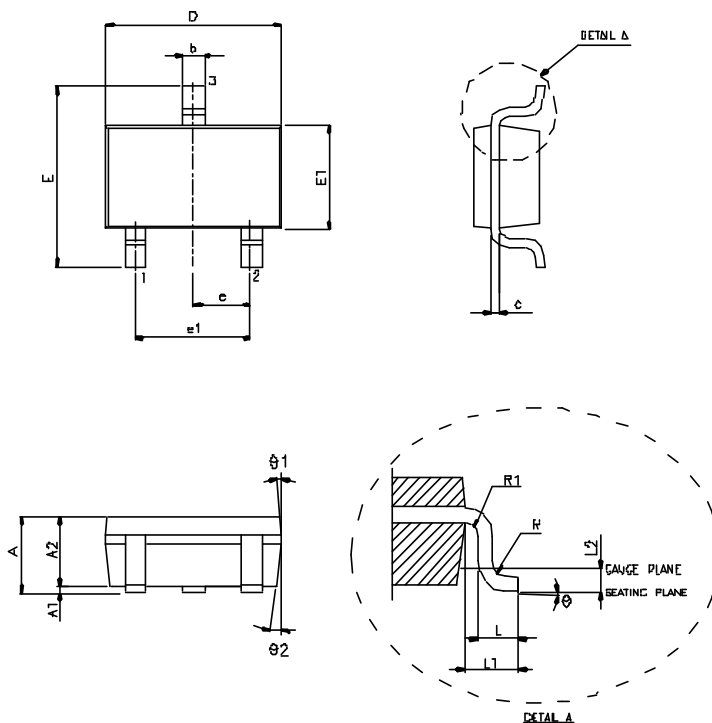
TIMING CHART





PACKAGE DIMENSION

SOT23-3 (SOT23)

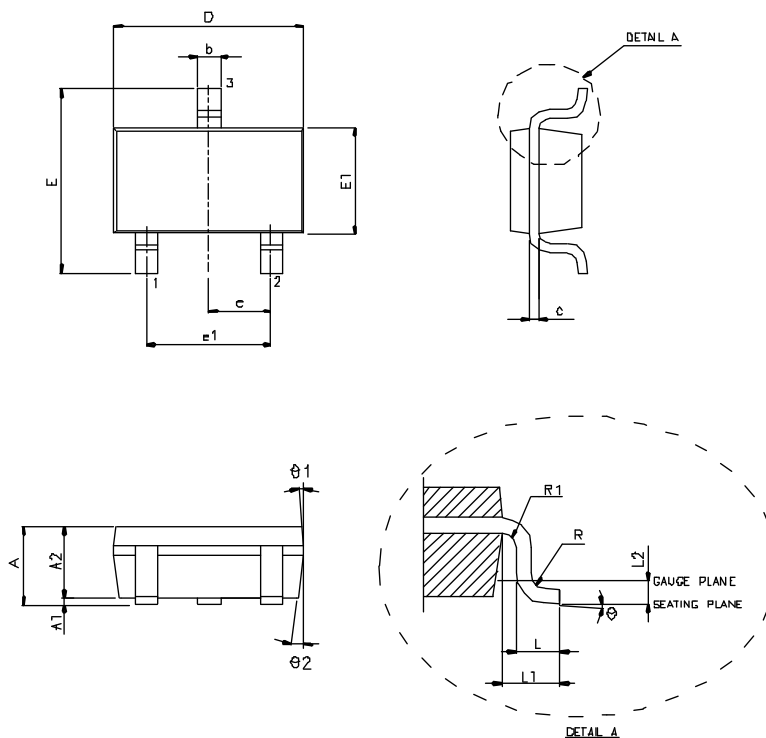


Symbol	Dimensions In Millimeters		
	MIN	TYP	MAX
A	1.05	1.2	1.3
A1	-----	-----	0.15
A2	1	1.1	1.15
b	0.3	-----	0.5
c	0.08	-----	0.22
D	2.90 BSC		
E	2.80 BSC		
E1	1.60 BSC		
e	0.95 BSC		
e1	1.90 BSC		
L	0.30	0.45	0.60
L1	0.60 REF		
L2	0.25 BSC		
R	0.1	-----	-----
R1	0.10	-----	0.25
θ	0°	4°	8°
$\theta 1$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



PACKAGE DIMENSION

TSOT23-3 (TSOT23)



Symbol	Dimensions In Millimeters		
	MIN	TYP	MAX
A	0.75	-----	0.80
A1	0.025	-----	0.050
A2	0.700	0.750	0.775
b	0.35	-----	0.50
c	0.1	-----	0.2
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°
$\theta 1$	5°	10°	15°

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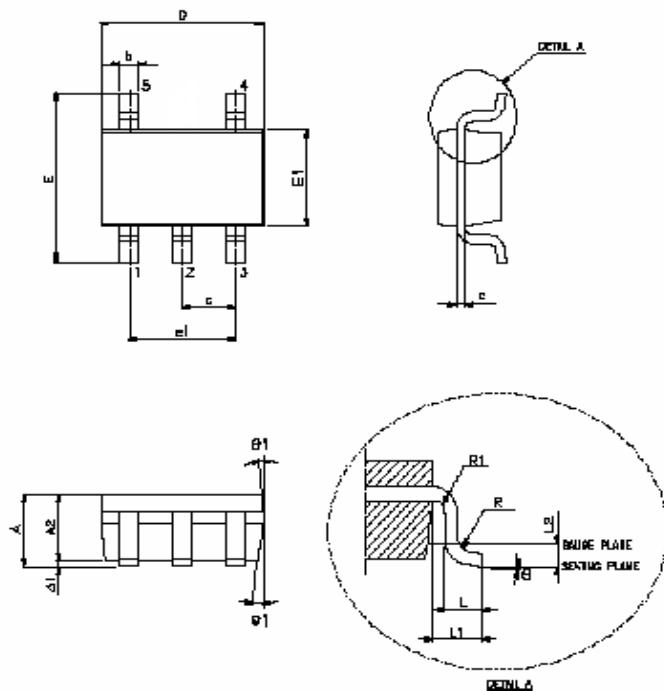
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PACKAGE DIMENSION

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°