

AV431 Adjustable Accurate Reference Source**FEATURES**

- The output voltage can be adjusted to 36V
- Low dynamic output impedance ,its typical value is 0.2Ω
- Trapping current capability is 1 to 100mA
- The typical value of the equivalent temperature factor in the whole temperature scope is 50 ppm/°C
- The effective temperature compensation in the working range of full temperature
- Low output noise voltage
- Fast on -state response

ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	SYMBOL	VALUE	UNITS
Cathode Voltage	V_{KA}	37	V
Cathode Current Range(Continuous)	I_{KA}	-100~+150	mA
Reference Input Current Range	I_{ref}	0.05~+10	mA
Power Dissipation	P_D	350	mW
Operating temperature	T_{opr}	0~70	°C
Storage temperature Range	T_{stg}	-55~+150°C	°C

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

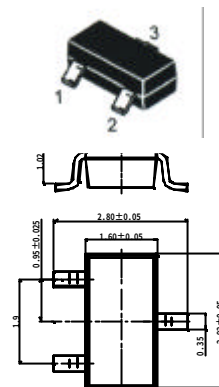
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Reference Input Voltage	V_{ref}	$V_{KA}=V_{REF}$, $I_{KA}=10\text{mA}$	2.440	2.495	2.550	V
Deviation of reference input Voltage Over temperature (note)	$\Delta V_{ref}/\Delta T$	$V_{KA}=V_{REF}$, $I_{KA}=10\text{mA}$ $T_{min} \leq T_a \leq T_{max}$		4.5	17	mV
Ratio Of Change in Reference Input Voltage to the change in Cathode Voltage	$\Delta V_{ref}/\Delta V_{KA}$	$I_{KA}=10\text{mA}$ A		-1.0	-2.7	m V/V
Reference Input Current	I_{ref}	$I_{KA}=10\text{mA}$, $R_1=10\text{K}\Omega$ $R_2=\infty$		1.5	0.5	μA
Deviation Of Reference Input Current Over Full Temperature Range	$\Delta I_{ref}/\Delta T$	$I_{KA}=10\text{mA}$, $R_1=10\text{K}\Omega$ $R_2=\infty$ $T_A=\text{full Temperature}$		0.4	1.2	μA
Minimum cathode current for Regulation	$I_{KA}(\text{min})$	$V_{KA}=V_{REF}$		0.45	1.0	mA
Off-state cathode Current	$I_{KA}(\text{OFF})$	$V_{KA}=36\text{V}$, $V_{REF}=0$		0.05	1.0	μA
Dynamic Impedance	Z_{KA}	$V_{KA}=V_{REF}$, $I_{KA}=1$ to 100mA $f \leq 1.0\text{KHz}$		0.15	0.5	Ω

Note : $T_{MIN}=0^{\circ}\text{C}$, $T_{MAX}=+70^{\circ}\text{C}$ **SOT-23-3L**

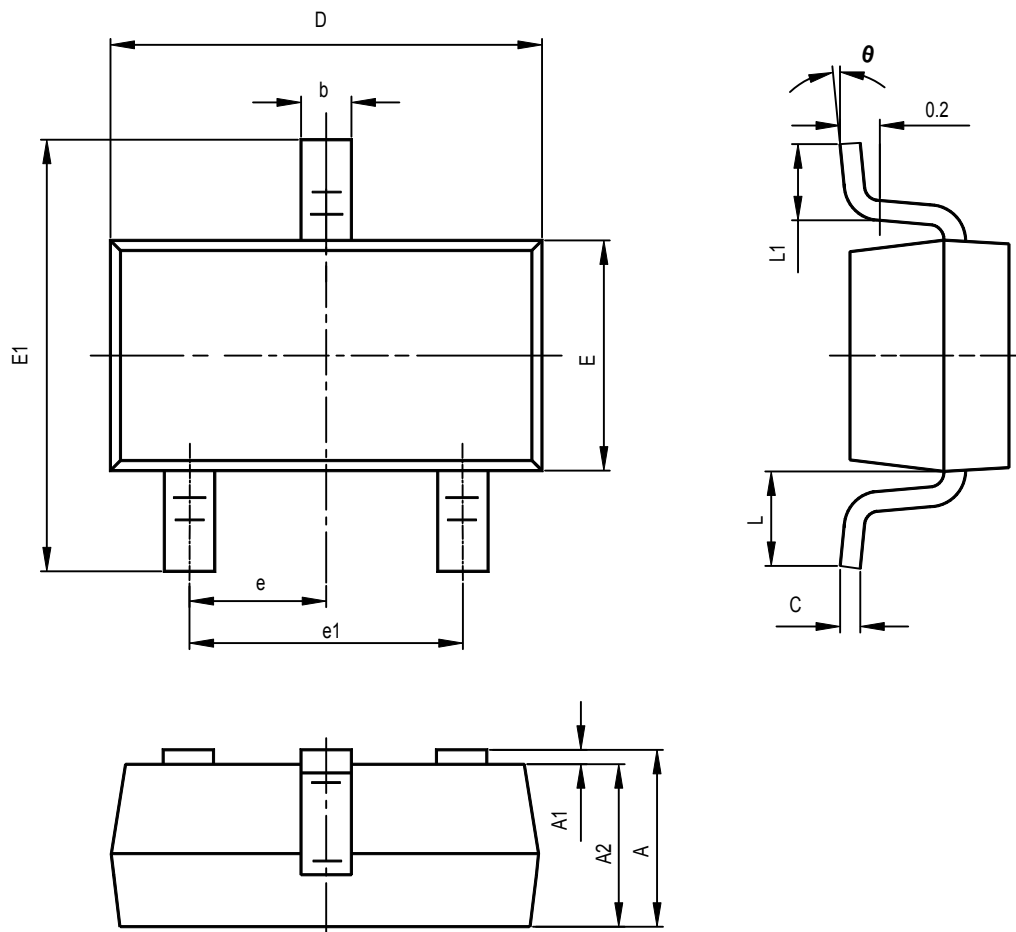
1. REFERENCE

2. CATHODE

3. ANODE



SOT-23-3L PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.400	0.012	0.016
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950TPY		0.037TPY	
e1	1.800	2.000	0.071	0.079
L	0.700REF		0.028REF	
L1	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°