

Rev.A Dec.-2022

Precision adjustable shunt regulator in a SOT-89 Plastic Package.

Precise reference voltage to 2.500V;guaranteed 0.4%,0.8% reference voltage Tolerance; sink current capability,1.0mA 100mA;quick turn-on; adjustable Output voltage, $V_O=V_{ref}$ 37V;low operational cathode current,400 μ A typical; 0.15 Ω typical output impedance, HF product.

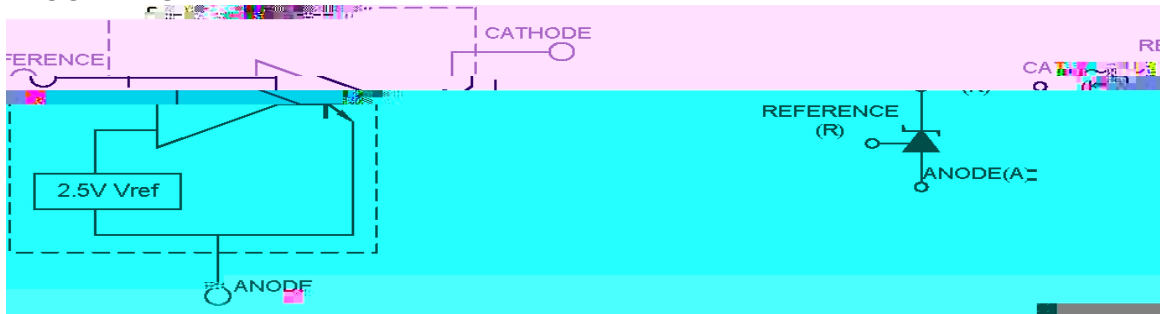
Linear regulators, adjustable power L1 Tf0 -4.28 TD0aff04df09(42.72 433. i c0 Tw449.66 40.40af8ge)52 5Tw449.6

Parameter	Symbol	Rating	Unit
Cathode to Anode Voltage	V_{KA}	37	V
Cathode Current Range, Continuous	I_K	-100 +100	mA
Reference Input Current Range, Continuous	I_{REF}	0.05 +10	mA
Power Dissipation	P_D	770	mW
Operating Ambient Temperature	T_{amb}	-40 125	
Junction Temperature	T_j	160	
Storage Temperature Range	T_{stg}	-65 150	

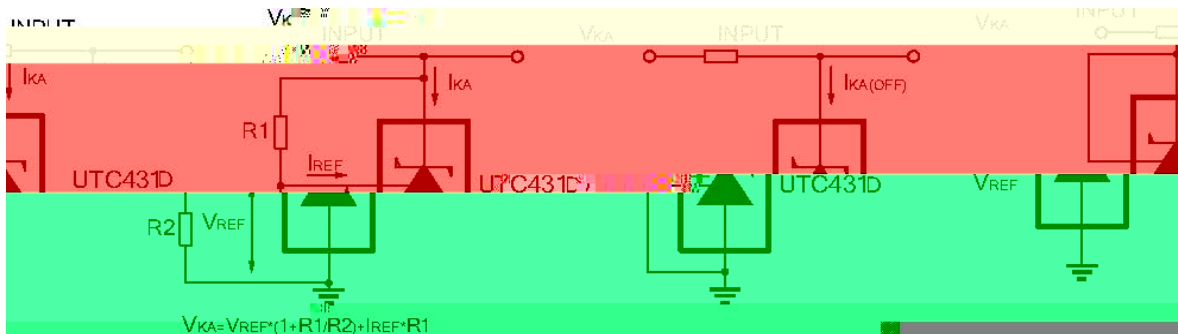
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reference Input voltage	V_{REF}	$V_{KA}=V_{REF}$ $I_K=10mA(A=0.4\%)$	2.490	2.500	2.510	V
		$V_{KA}=V_{REF}$ $I_K=10mA(B=0.8\%)$	2.480	2.500	2.520	V
Deviation of Reference Input Voltage Over-Temperature	V_{REF}/T	$V_{KA}=V_{REF}$ $I_K=10mA$ $T_A=-25$ 85		4.5	17	mV
Ratio of Change in Reference Input Voltage to the Change in Cathode Voltage	V_{REF}/V_{KA}	$I_K=10mA$ $V_{KA}=10V$ to V_{REF}		-1	-2.7	mV/V
		$I_K=10mA$ $V_{KA}=36V$ to $10V$		-0.45	-2.0	mV/V
Reference Input current	I_{REF}	$I_K=10mA$ $R_1=10K\Omega$ $R_2=open$		1.0	4.0	μA
Deviation of Reference Input Current Over Full Temperature Range	I_{REF}/T	$I_K=10mA$ $R_1=10K\Omega$, $R_2=open$ $T_A=-40$ 125		0.4	1.2	μA
Minimum Cathode Current for Regulation	$I_{K(min)}$	$V_{KA}=V_{REF}$		0.4	1.0	mA
Off-state cathode current	$I_{K(off)}$	$V_{KA}Of$				

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BLOCK DIAGRAM:

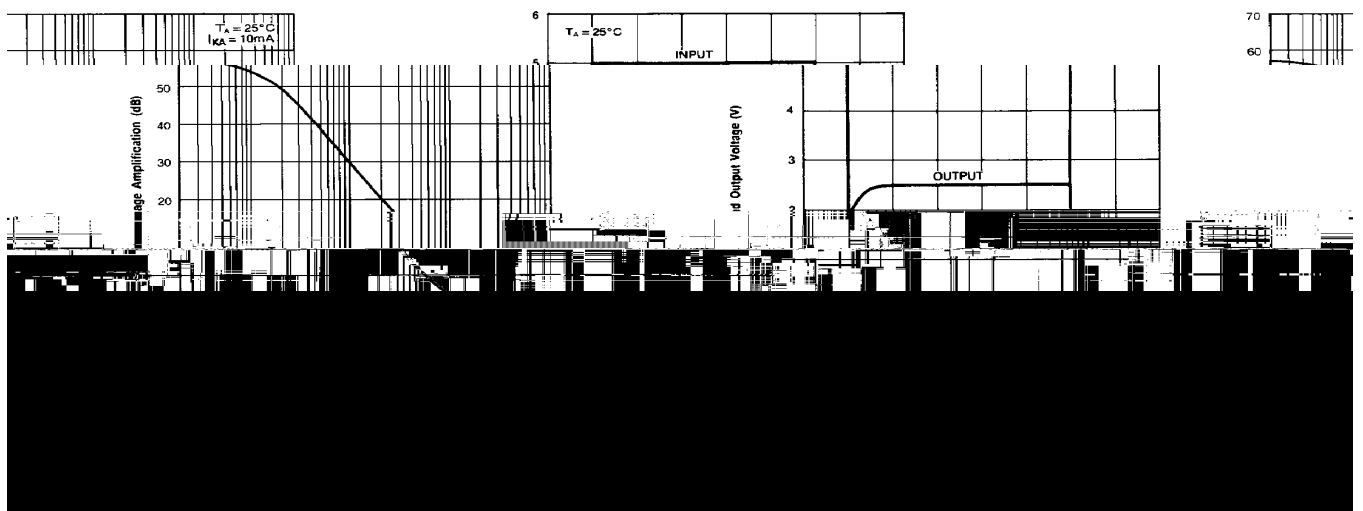
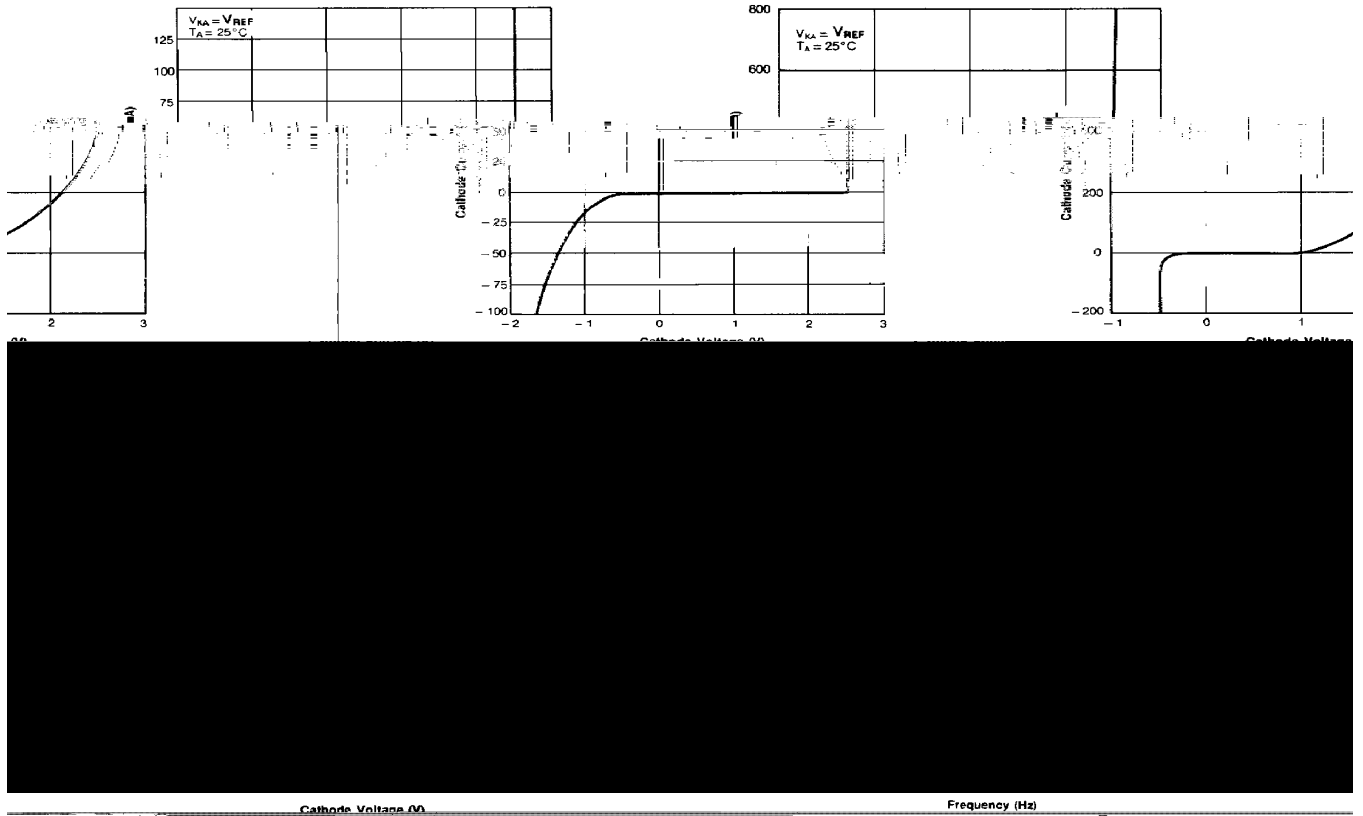


TEST CIRCUITS:



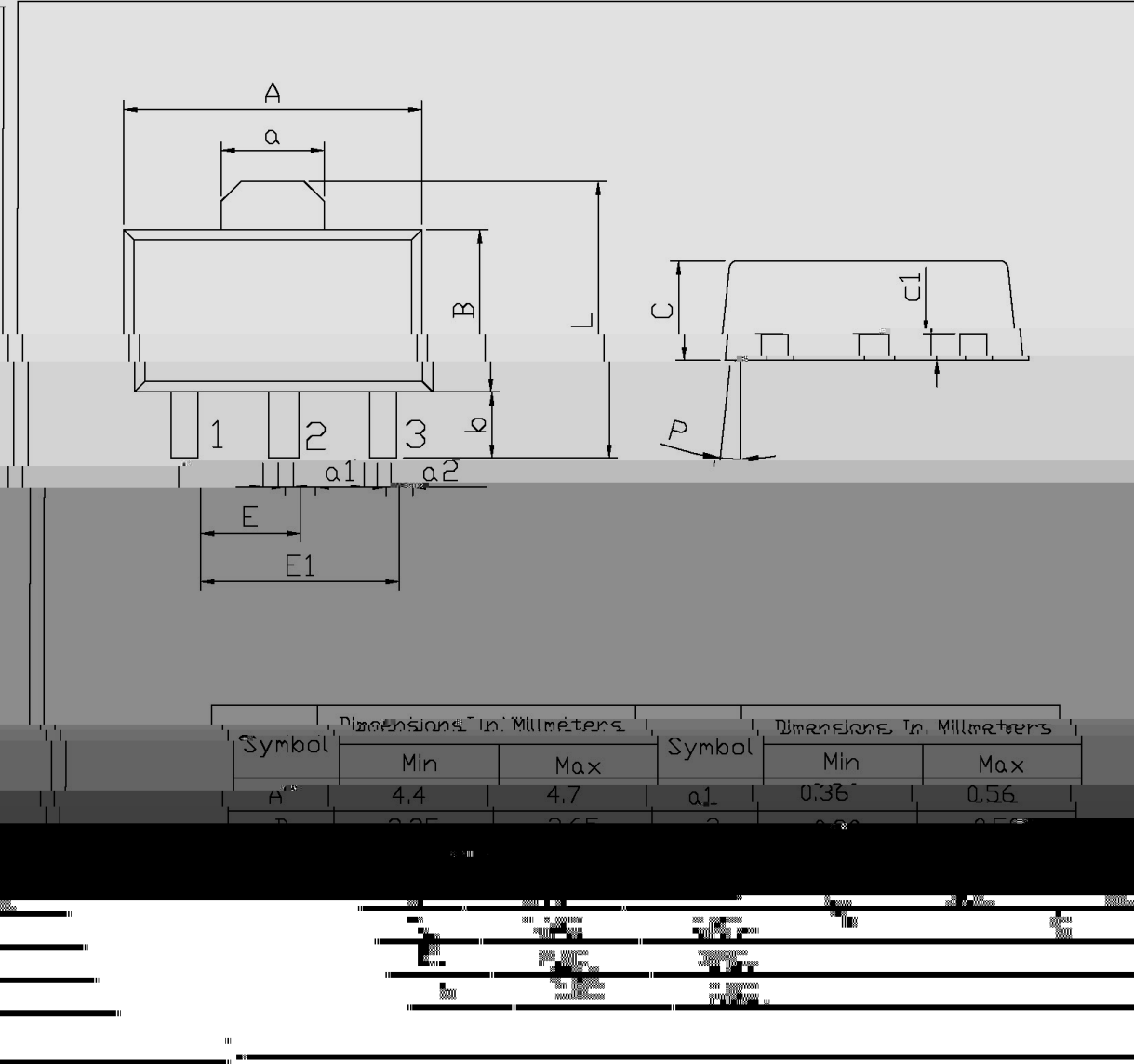
Test Circuit For $V_{KA} = V_{REF} \cdot (1 + R1/R2) + I_{REF} \cdot R1$

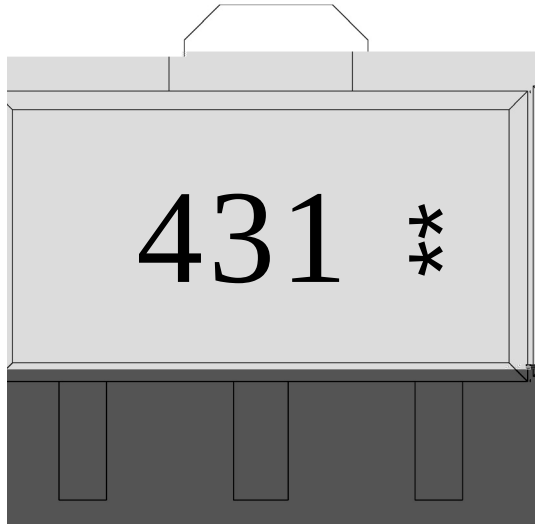
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SOT-89

单位: mm





431

Note:

431: Product Type Code

** : Lot No. Code, code change with Lot No

Temperature Profile for IR Reflow Soldering(Pb-Free)

- 1

150 180

60 90sec;

2

245 5

5 0.5sec;
- 3

2 10 /sec.

Note:

1.Preheating:150~180 , Time:60~90sec.

2.Peak Temp.:245 5 , Duration:5 0.5sec.

3. Cooling Speed: 2~10 /sec.

260 5

10 1 sec.

Temp.:260±5

Time:10±1 sec

/ REEL

Package Type	Units	Dimension	(unit mm³)
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