

/ Descriptions

SOT-89

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

/ Features

2.500V; 0.4%,0.8%; 1.0mA 100mA; ;
 $V_O=V_{ref}$ 37V; (:400 μ A); (:0.15 Ω)

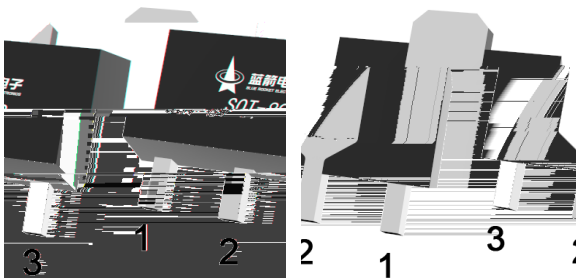
Precise reference voltage to 2.500V;guaranteed 0.4%,0.8% reference voltage Tolerance; sink current capability,1.0mA 100mA;quick turn-on; adjustable Output voltage, $V_O=V_{ref}$ 37V;low operational cathode current,400 A typical; 0.15 typical output impedance, HF product.

/ Applications

Linear regulators, adjustable power supply, switching power supply.

/ Equivalent Circuit

/ Pinning



PIN1 R

PIN 2 A

PIN 3 K

/ Marking

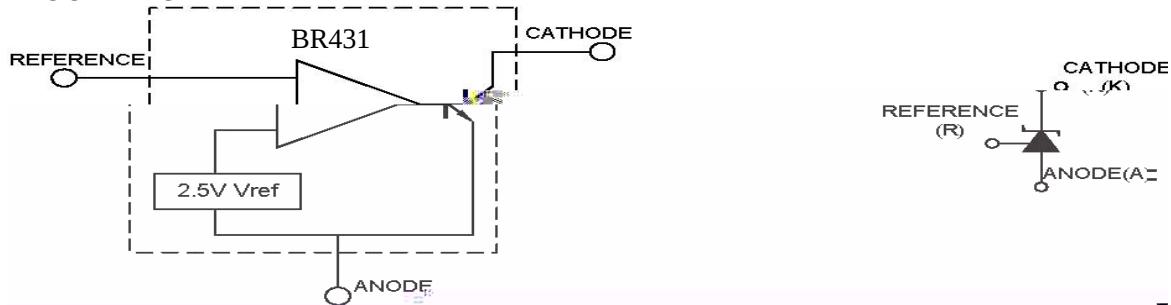
See Marking Instructions

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	

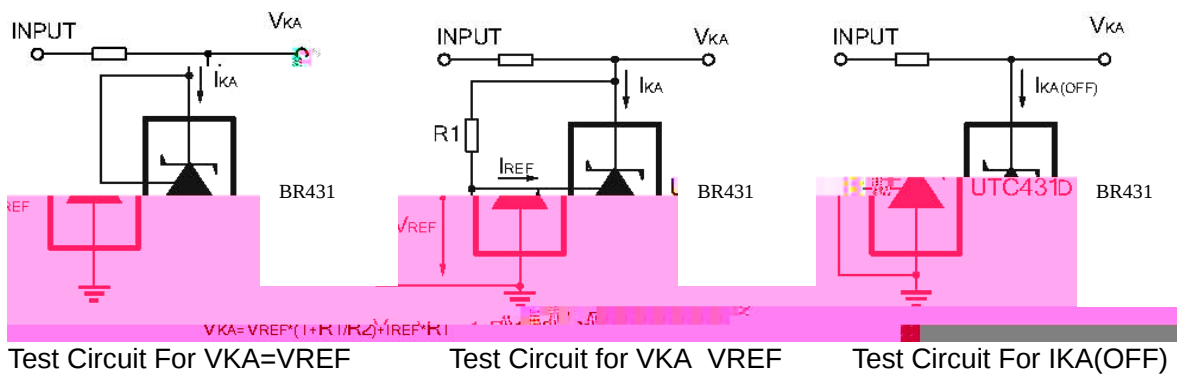
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reference Input voltage	V_{REF}	$V_{KA}=V_{REF}$ $I_K=10mA(A=0.4\%)$	2.490	2.500	2.510	V
		$V_{KA}=V_{REF}$ $I_K=10mA(B=0.8\%)$	2.480	2.500	2.520	V
Deviation of Reference Input Voltage Over-Temperature	V_{REF}/T	$V_{KA}=V_{REF}$ $I_K=10mA$ $T_A=-25\ 85$		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}	$I_K=10mA$ $R_1=10K$ $R_2=open$		1.0	4.0	A
Deviation of Reference Input Current Over Full Temperature Range	I_{REF}/T	$I_K=10mA$ $R_1=10K$, $R_2=open$ $T_A=-40\ 125$		0.4	1.2	A
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}				

& Test circuits&Typical Application

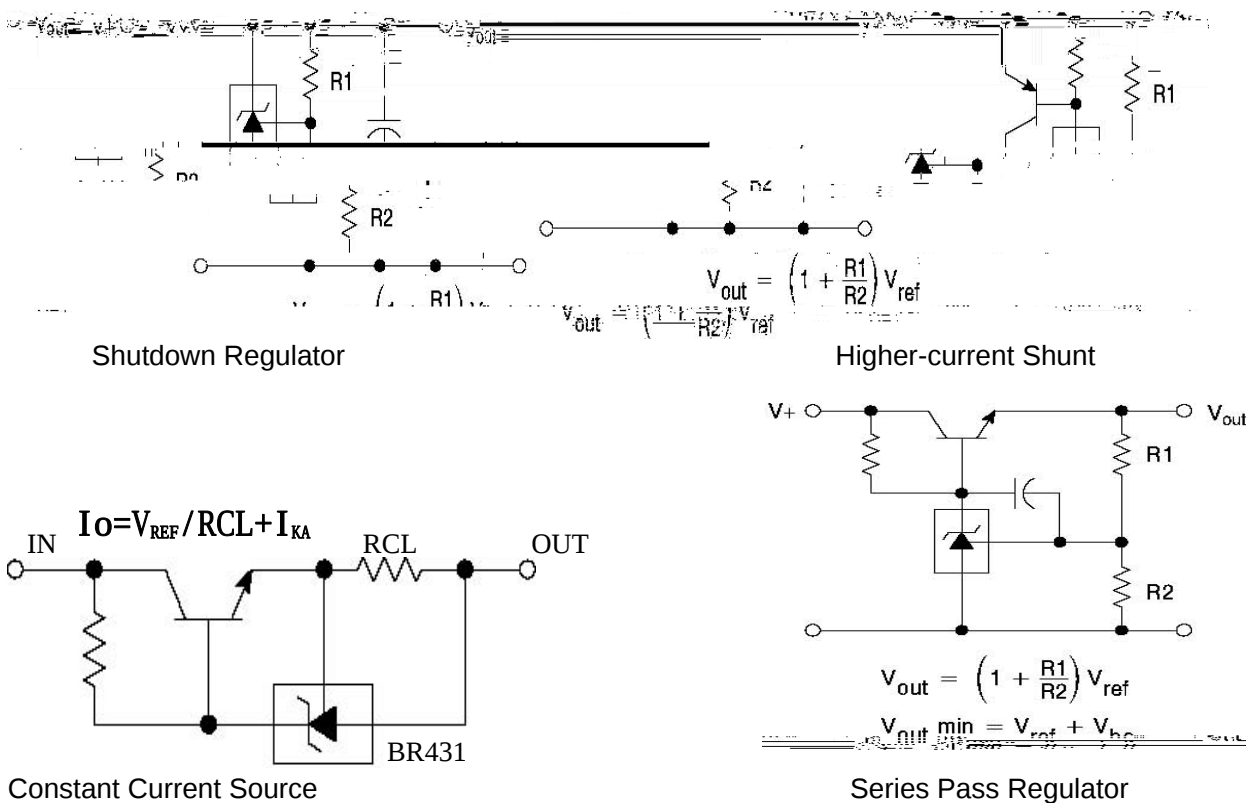
BLOCK DIAGRAM:



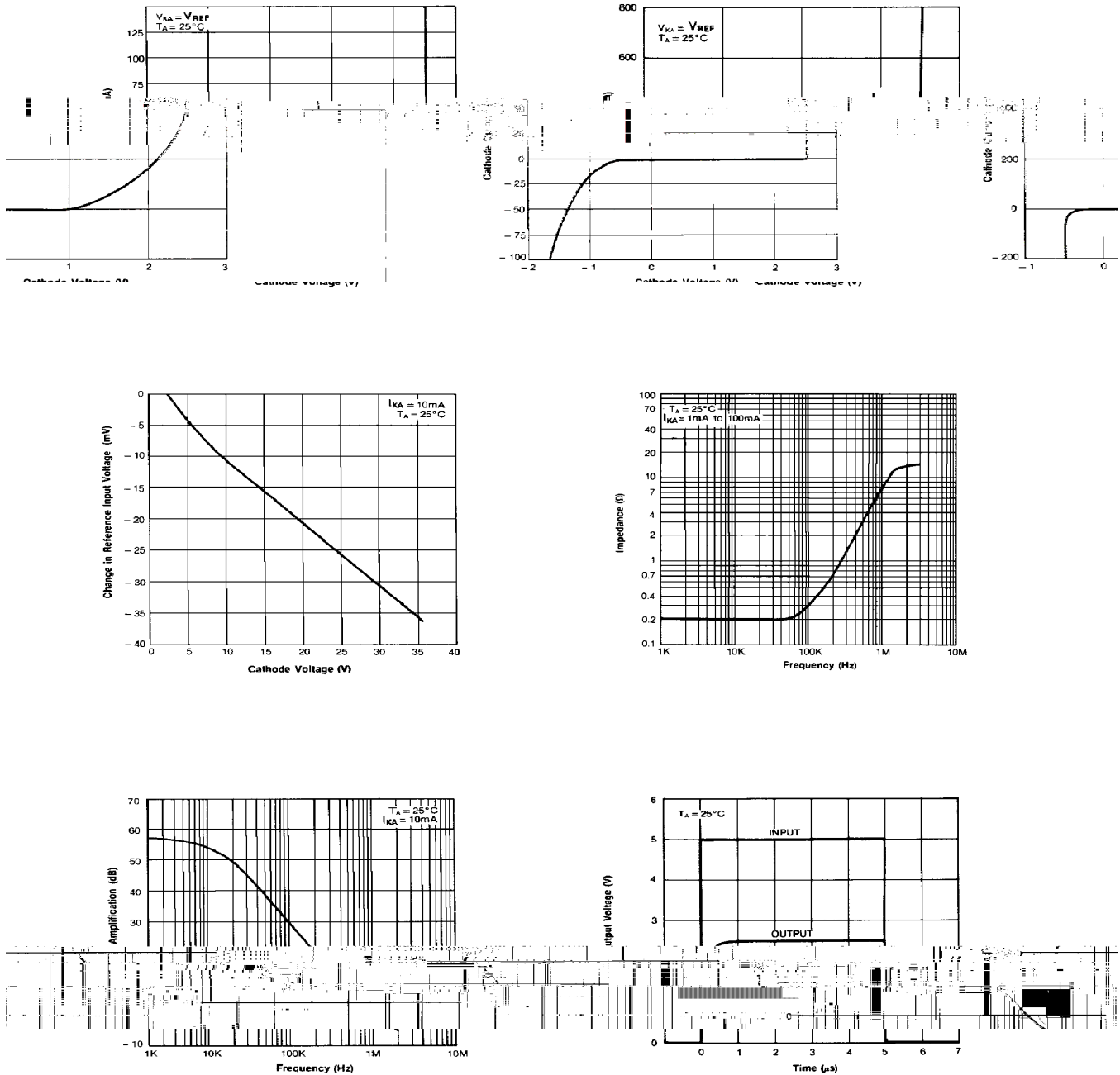
TEST CIRCUITS:



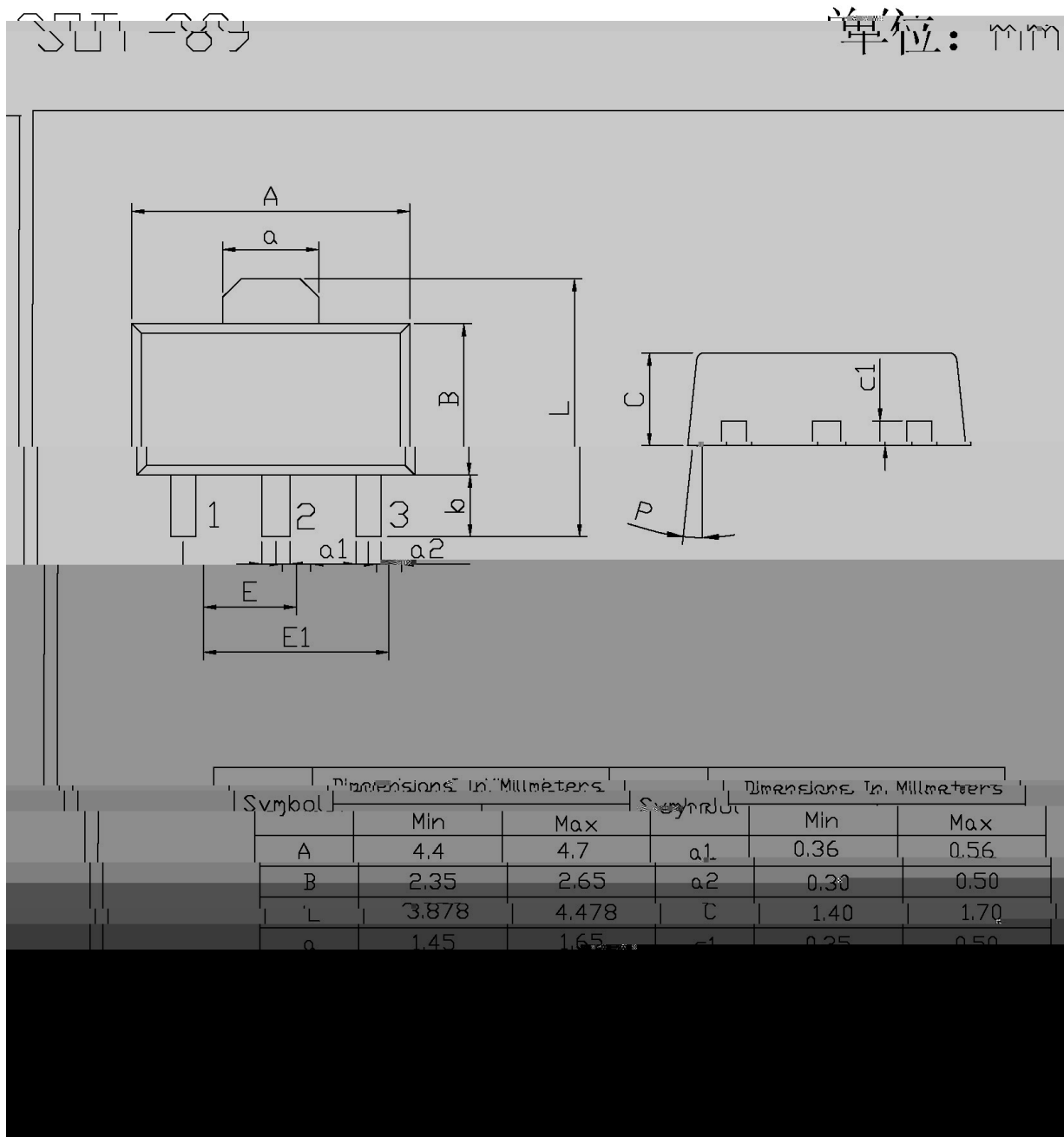
TYPICAL APPLICATION:



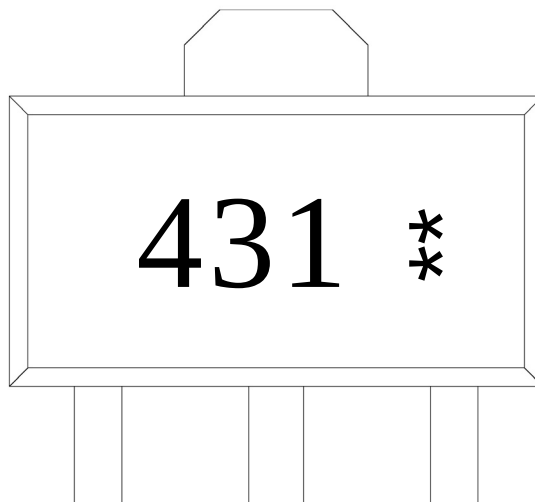
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



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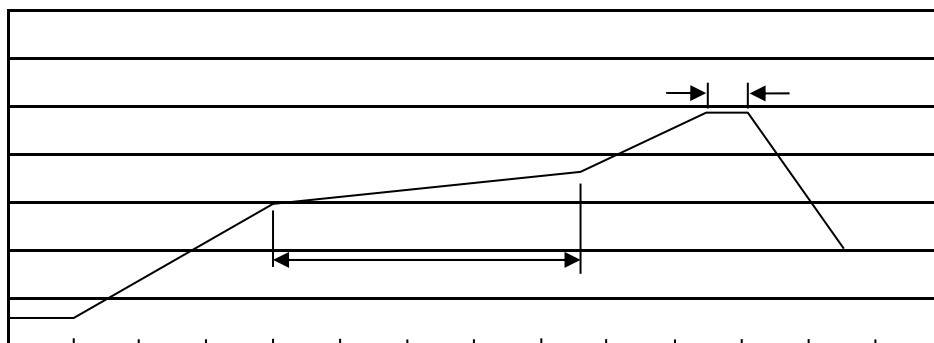
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Note:

431: Product Type Code

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

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Note:

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|---|---------|-----------|---|
| 1 | 150 180 | 60 90sec; | 1.Preheating:150~180 , Time:60~90sec. |
| 2 | 245±5 | 5±0.5sec; | 2.Peak Temp.:245±5 , Duration:5±0.5sec. |
| 3 | 2 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension		(unit mm ³)

/ Notices