/ Descriptions

SOT-23

Precision adjustable shunt regulator in a SOT-23 Plastic Package.

/ Features

2.495V; 0.5%,1% 2%; 1.0mA 100mA; ;

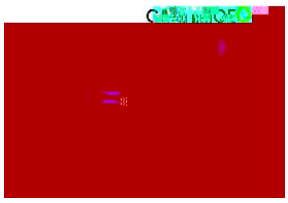
$V_O=V_{ref}$ 36V; (:50μA); (:0.15Ω)

Precise reference voltage to 2.495V;guaranteed 0.5%,1% or 2% reference voltage Tolerance; sink current capability,1.0mA 100mA;quick turn-on; adjustable Output voltage, $V_O=V_{ref}$ 36V;low operational cathode current,50μA typical; 0.15Ω typical output impedance.

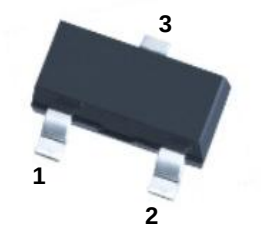
/ Applications

Linear regulators, adjustable power supply, switching power supply.

/ Equivalent Circuit



/ Pinning



PIN1 R PIN 2 K PIN 3 A

/ h_{FE} Classifications & Marking

Marking	H431

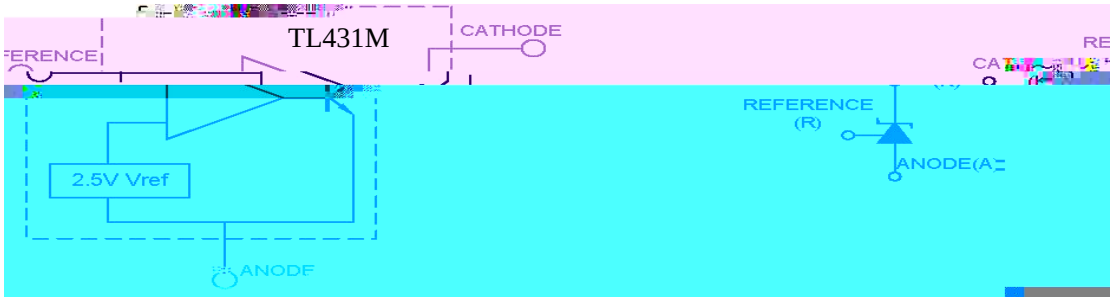
Parameter	Symbol	Rating	Unit
Cathode to Anode Voltage	V_{KA}	37	V
Cathode Current Range, Continuous	I_K	-100 +100	mA
Reference Input Current Range, Continuous	I_{REF}	0.05 +10	mA
Power Dissipation	P_D	370	mW
Operating Ambient Temperature	T_{amb}	-40 125	
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-65 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
		$V_{KA}=V_{REF}$ I_K=10mA(A=0.5%)	2.483	2.495	2.507	V
		$V_{KA}=V_{REF}$ I_K=10mA(B=1%)	2.470	2.495	2.520	V

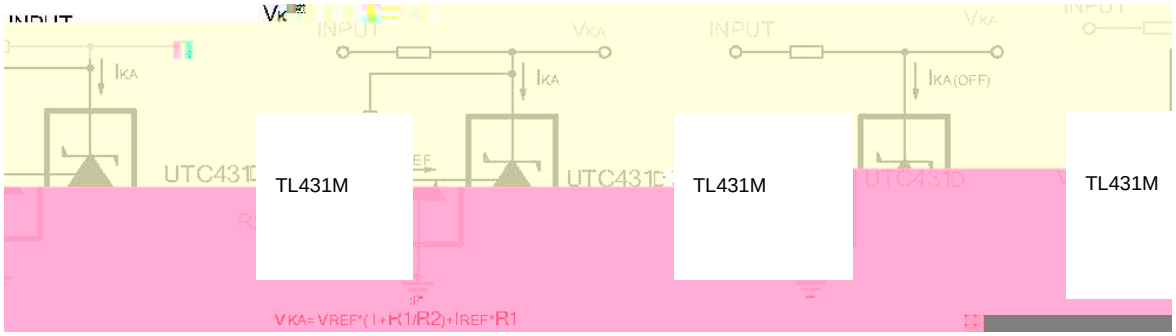
=10m

& Test circuitsypicApplication

BLOCK DIAGRAM:

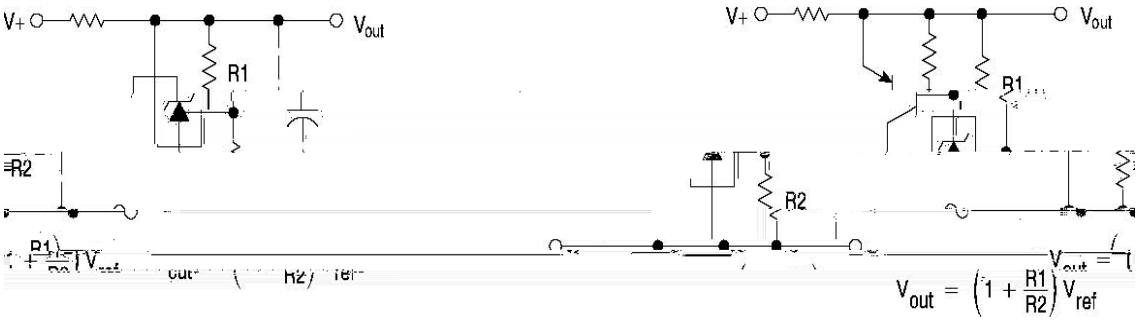


TEST CIRCUITS:



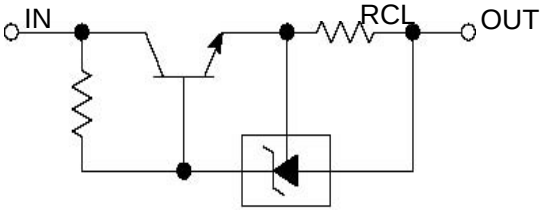
Test Circuit For VKA=VREF Test Circuit for VKA≥VREF TeCircuit For IKA(OFF)

TYPICAL APPLICATION:

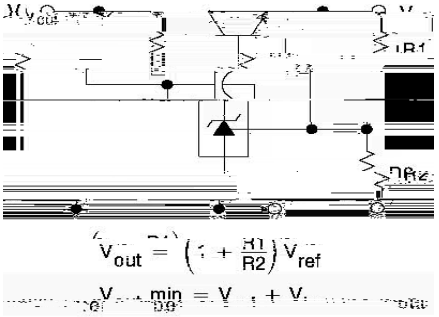


Shutdown Regulator Higher-current Shunt

Io=V_{REF}/RCL+I_{KA}

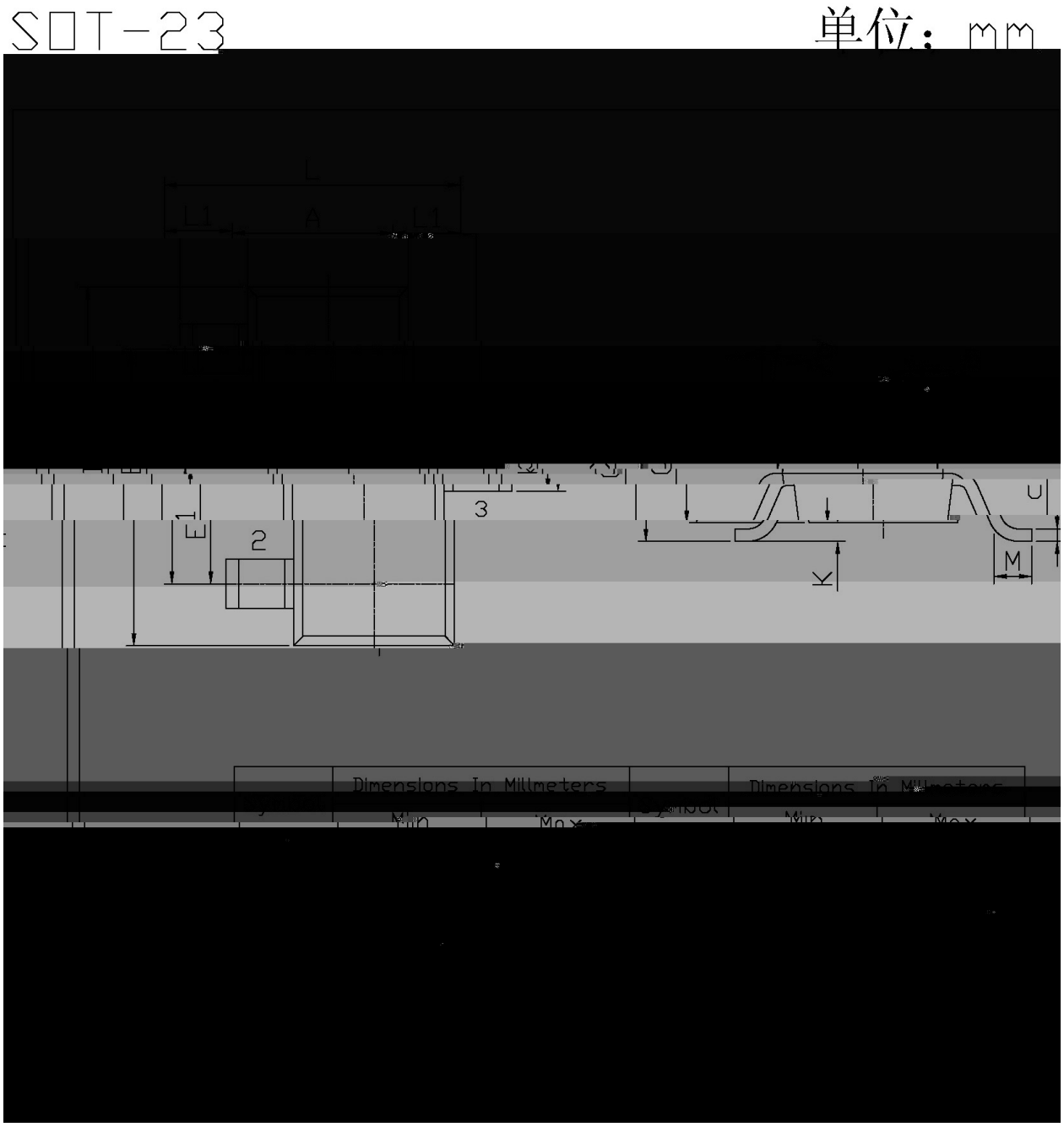


Constant Current Source TL431M

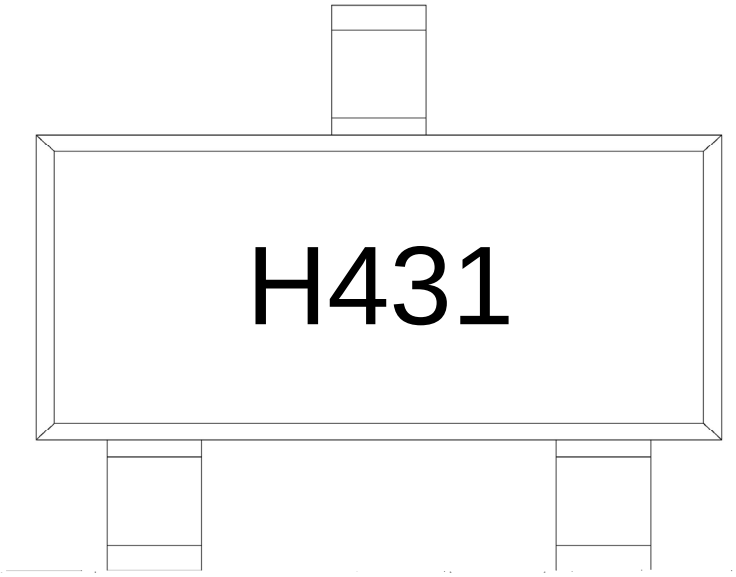


Series Pass Regulator

/ Package Dimensions



/ Marking Instructions



H

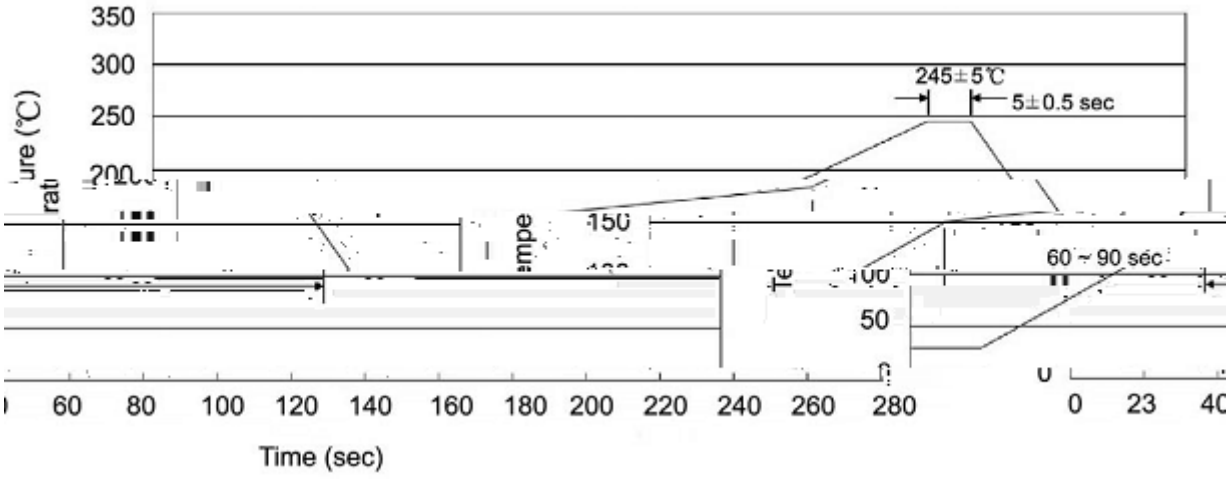
431

Note:

H: Company Code.

431: Product Type.

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

1 25 150 60 90sec;

1.Preheating:25~150 , 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 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm^3)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SOT-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205

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