

/ Descriptions

SOT-23

Precision adjustable shunt regulator in a SOT-23 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.

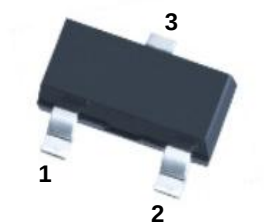
/ Applications

Linear regulators, adjustable power supply, switching power supply.

/ Equivalent Circuit



/ Pinning



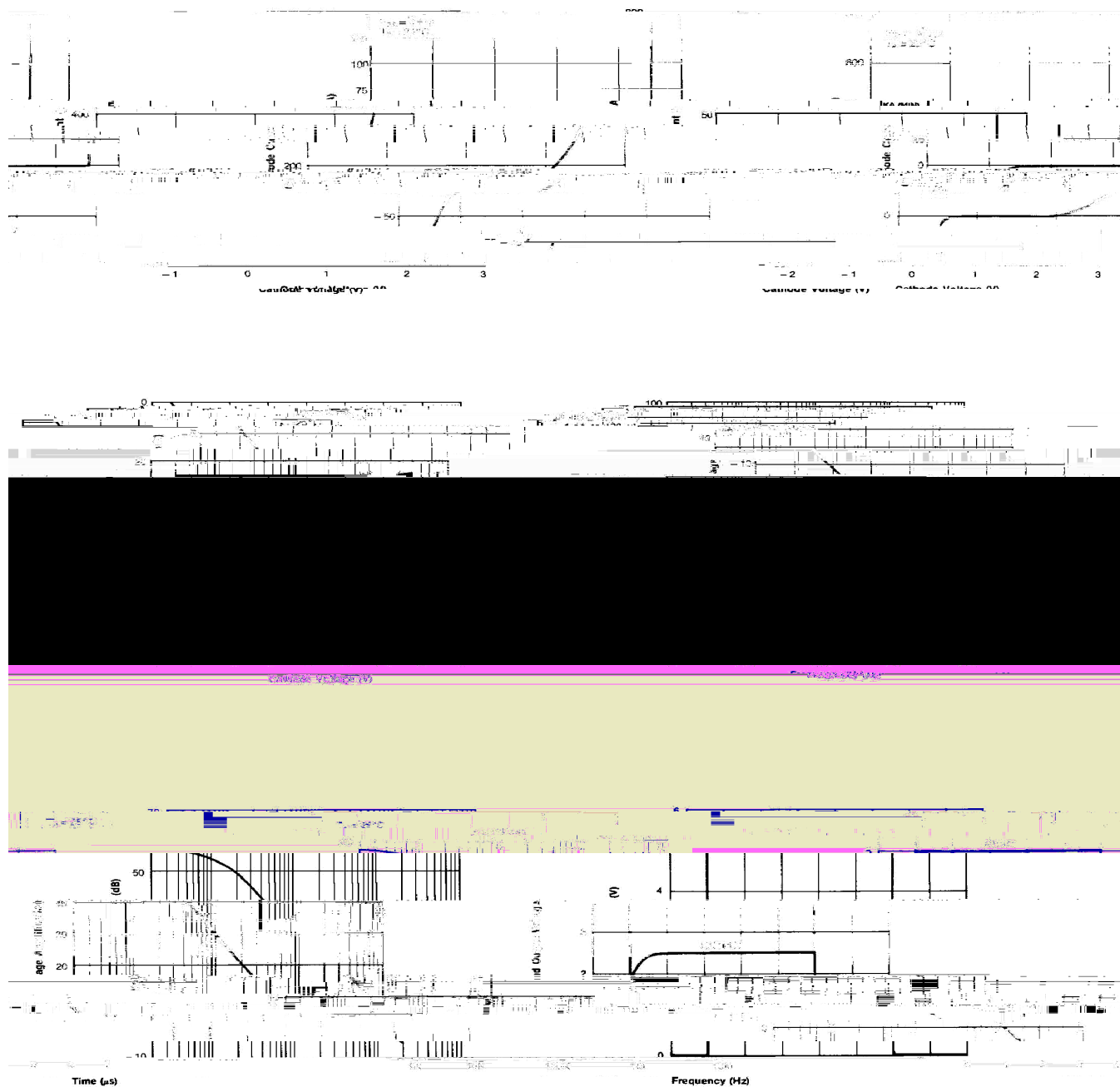
PIN1 R PIN 2 K PIN 3 A

/ h_{FE} Classifications & Marking

Marking	BR431
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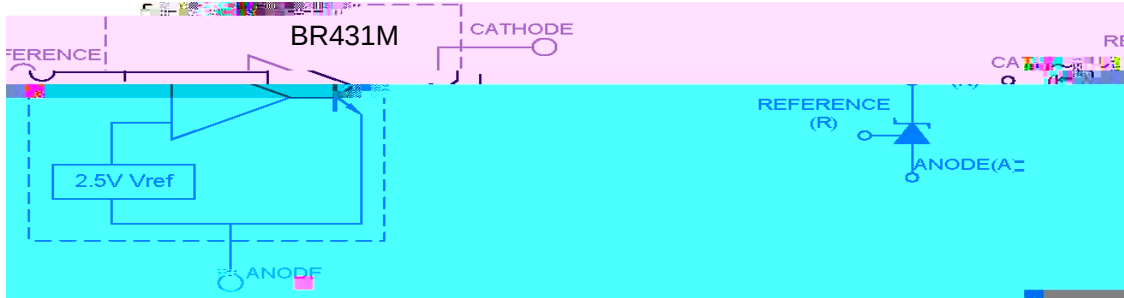
Parameter	Symbol	Rating	Unit
Cathode to Anode Voltage	V_{KA}	37	V
Cathode Current Range, Continuous	I_K	-100 +100	mA
Reference Input Current Range, Continuous	I_{REF}	0.05 +10	mA
Power Dissipation	P_D		

/ Electrical Characteristic Curve

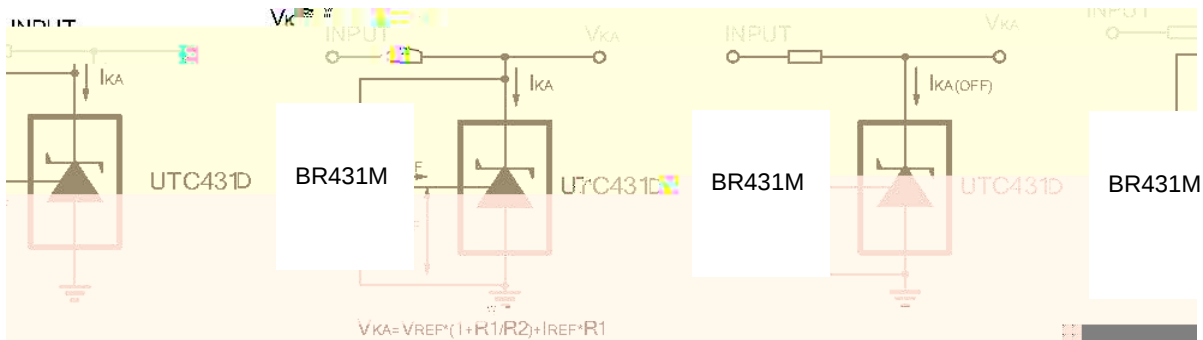


& Test circuits&Typical Application

BLOCK DIAGRAM:



TEST CIRCUITS:

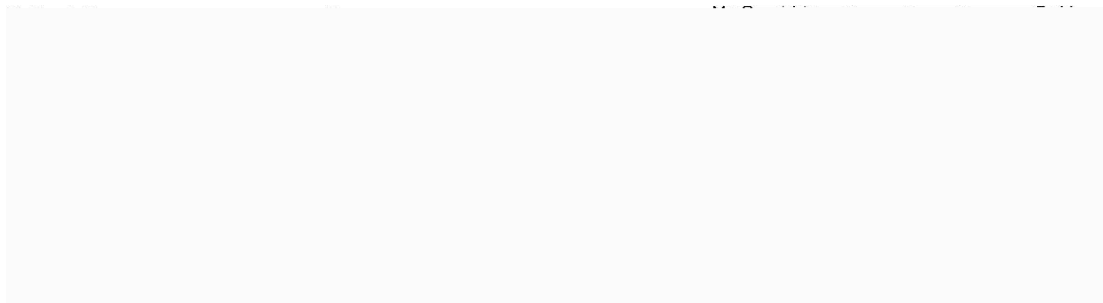


Test Circuit For $V_{KA}=V_{REF}$

Test Circuit for $V_{KA} = V_{REF}$

Test Circuit For $I_{KA}(\text{OFF})$

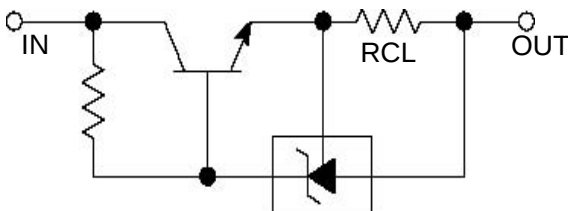
TYPICAL APPLICATION:



Shutdown Regulator

Higher-current Shunt

$$I_0 = V_{REF}/R_{CL} + I_{KA}$$



Constant Current Source

BR431M

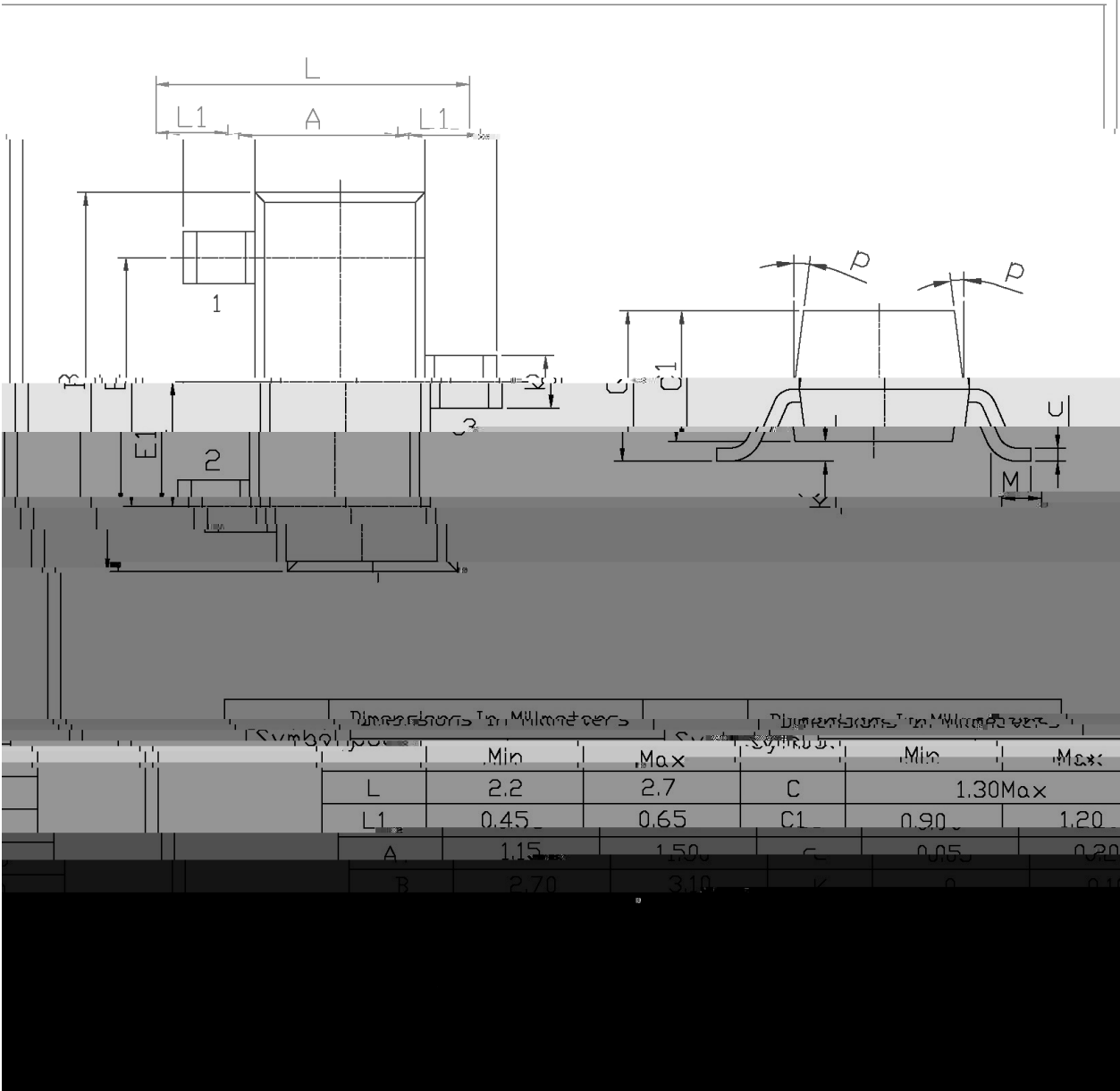


Series Pass Regulator

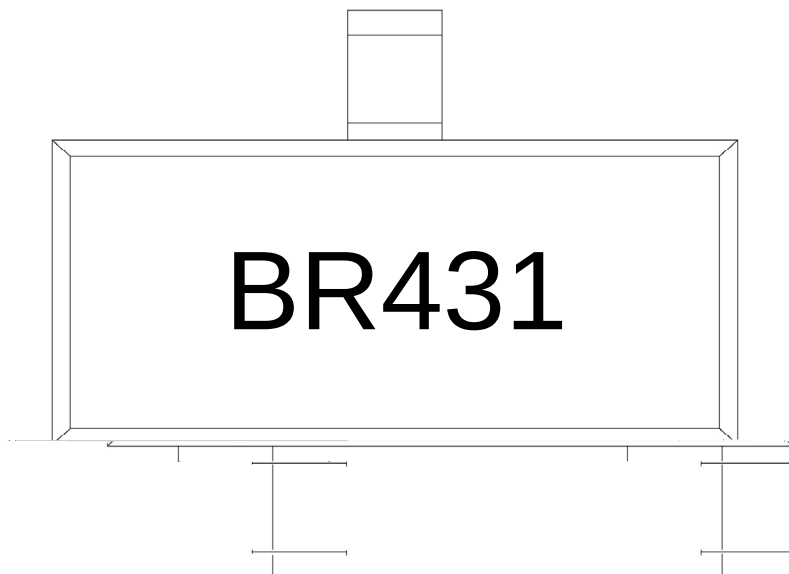
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



BR

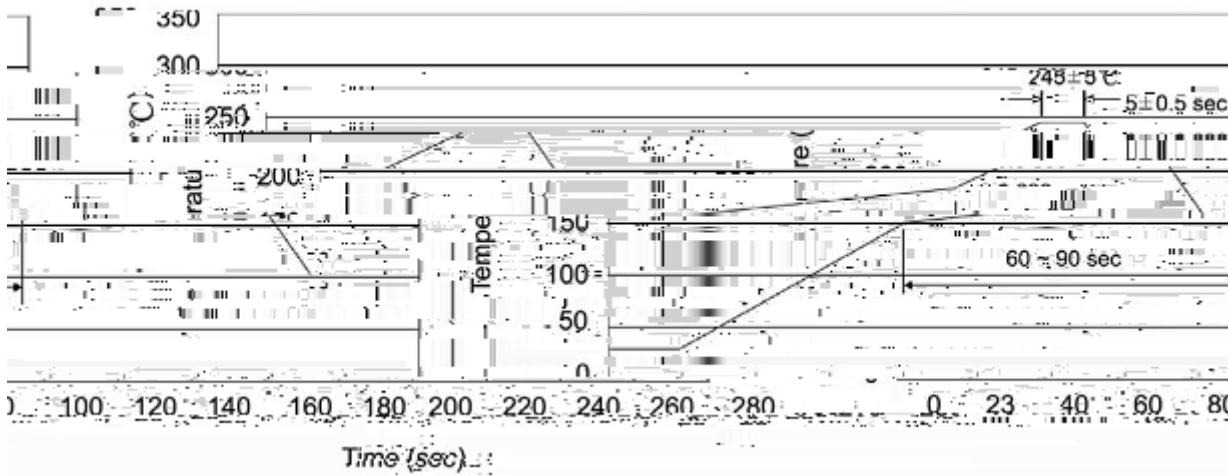
431

Note:

BR: 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	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205

/ Notices