



### / Descriptions

塑封封装精密可调基准电源。

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

### / Features

精确参照电压，允许电压误差为、，阴极电流能力为~，快速导通，可调节输出电压为  $V_O = V_{ref} \sim 20V$ ，阴极工作电流低 典型值，动态输出阻抗低 典型值，无卤产品。

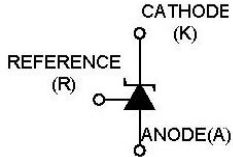
Precise reference voltage to 1.240V, guaranteed 0.5%, 1% ,reference voltage Tolerance, sink current capability, 100uA~100mA, quick turn-on, adjustable output voltage,  $V_O = V_{ref} \sim 20V$ , low operational cathode current, 55μA typical, 0.05 typical output impedance, HF Product.

### / Applications

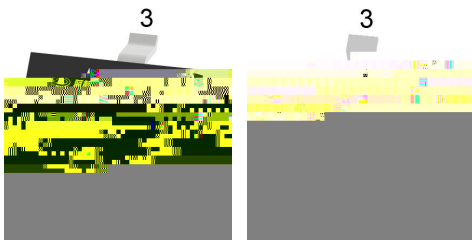
用于线性调整器，可调节电源和开关电源。

Linear regulators, adjustable power supply, switching power supply.

### / Equivalent Circuit



### / Pinning



PIN1 : R

PIN 2 : K

PIN 3 : A

### / Marking

Marking	H432
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/ Absolute Maximum Ratings(Ta=25 )

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Cathode voltage	$V_{KA}$	20	V
Continuous cathode current range	$I_K$	-100~+100	mA
Reference current range	$I_{REF}$	10	mA
Power Dissipation	$P_D$	370	mW
Ambient temperature range	$T_{amb}$	-40~125	°C
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-65~150	°C

/ Electrical Characteristics(Ta=25 )

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Reference voltage	$V_{REF}$	$V_{KA}=V_{REF}$ $I_K=10mA(A=0.5\%)$	1.234	1.240	1.246	V
		$V_{KA}=V_{REF}$ $I_K=10mA(B=1\%)$	1.228	1.240	1.252	V
Reference voltage drift over temp. range	$\Delta V_{REF}/T$	$V_{KA}=V_{REF}$ $I_K=10mA$ $T_A=-40\sim 85^\circ C$		3	10	mV
Voltage ratio (open loop gain)	$\Delta V_{REF}/\Delta V_{KA}$	$I_K=10mA$ $\Delta V_{KA}=V_{REF}$ to 16V		-0.5	-1.5	mV/V
Reference current	$I_{REF}$	$I_K=10mA$ $R_1=10K$ $R_2=open$ $T_A=-40\sim 85^\circ C$		0.1	0.4	$\mu A$
		$I_K=10mA$ $R_1=10K$ $R_2=open$		0.15	0.4	$\mu A$
Min. cathode current	$I_{K(min)}$	$V_{KA}=V_{REF}$		55	80	$\mu A$
Off-state cathode current	$I_{K(off)}$	$V_{KA}=18V$ $V_{REF}=0V$		0.04	0.1	$\mu A$
		$V_{KA}=6V$ $V_{REF}=0V$		0.01	0.05	$\mu A$
Dynamic impedance	$ Z_{KA} $	$V_{KA}=V_{REF}$ $I_K=1mA$ to 100mA, f 1.0KHz		0.05	0.15	

/ Electrical Characteristic Curve

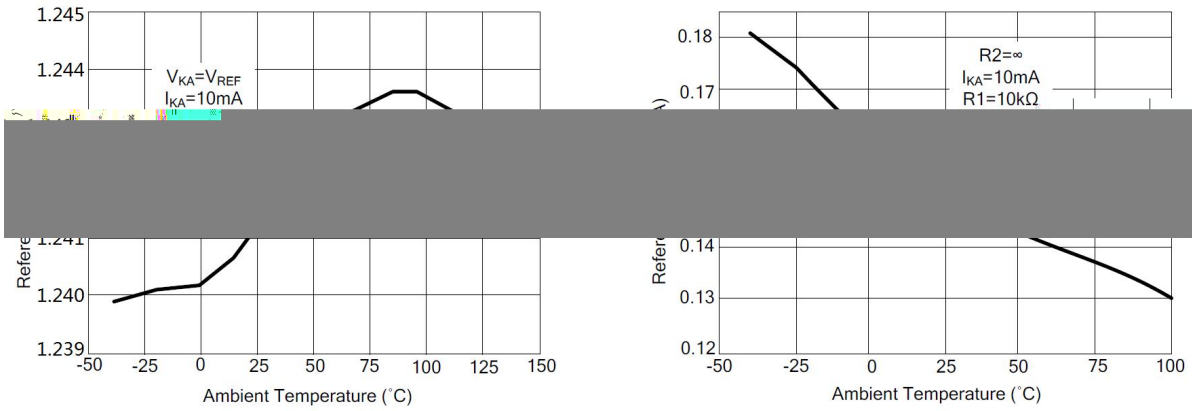
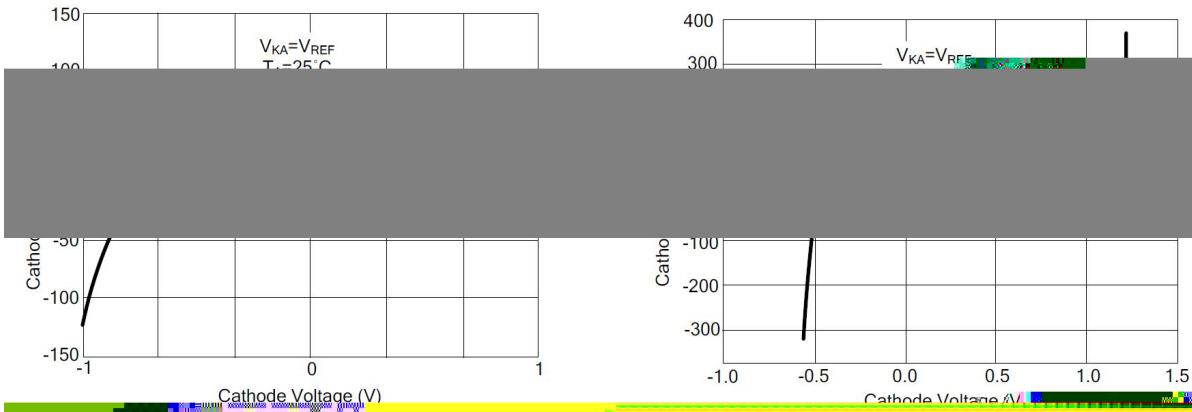


Figure 1. Reference Voltage VS. Ambient Temperature

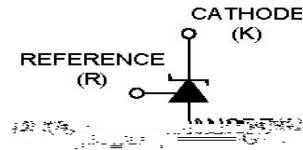
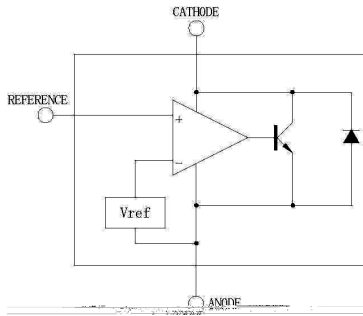
Figure 2. Reference Voltage VS. Ambient Temperature



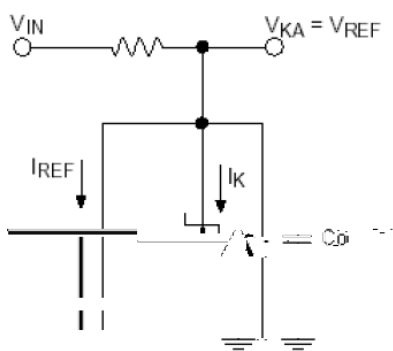


**& Test circuits&Typical Application**

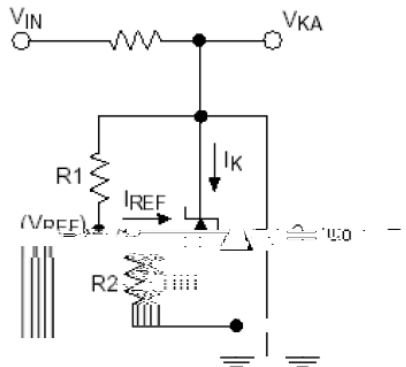
**BLOCK DIAGRAM:**



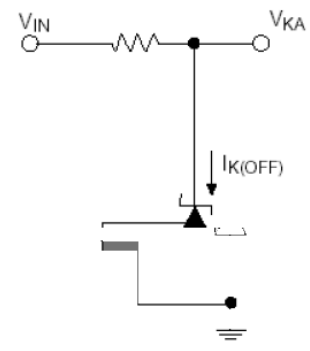
**TEST CIRCUITS:**



Test Circuit For  $V_{KA}=V_{REF}$ ,  
 $C_o=0.1\mu F$

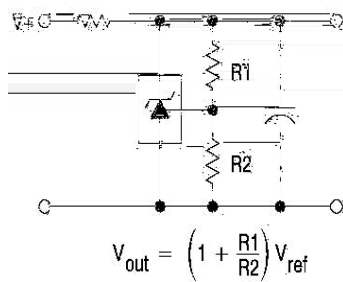


Test Circuit for  $V_{KA} = V_{REF}$   
 $C_o=0.1\mu F$



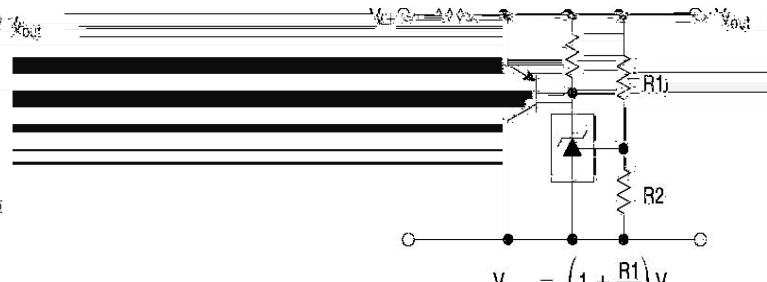
Test Circuit For  $I_{K(OFF)}$

**TYPICAL APPLICATIONS:**



Shutdown Regulator

$$V_{out} = \left(1 + \frac{R1}{R2}\right) V_{ref}$$

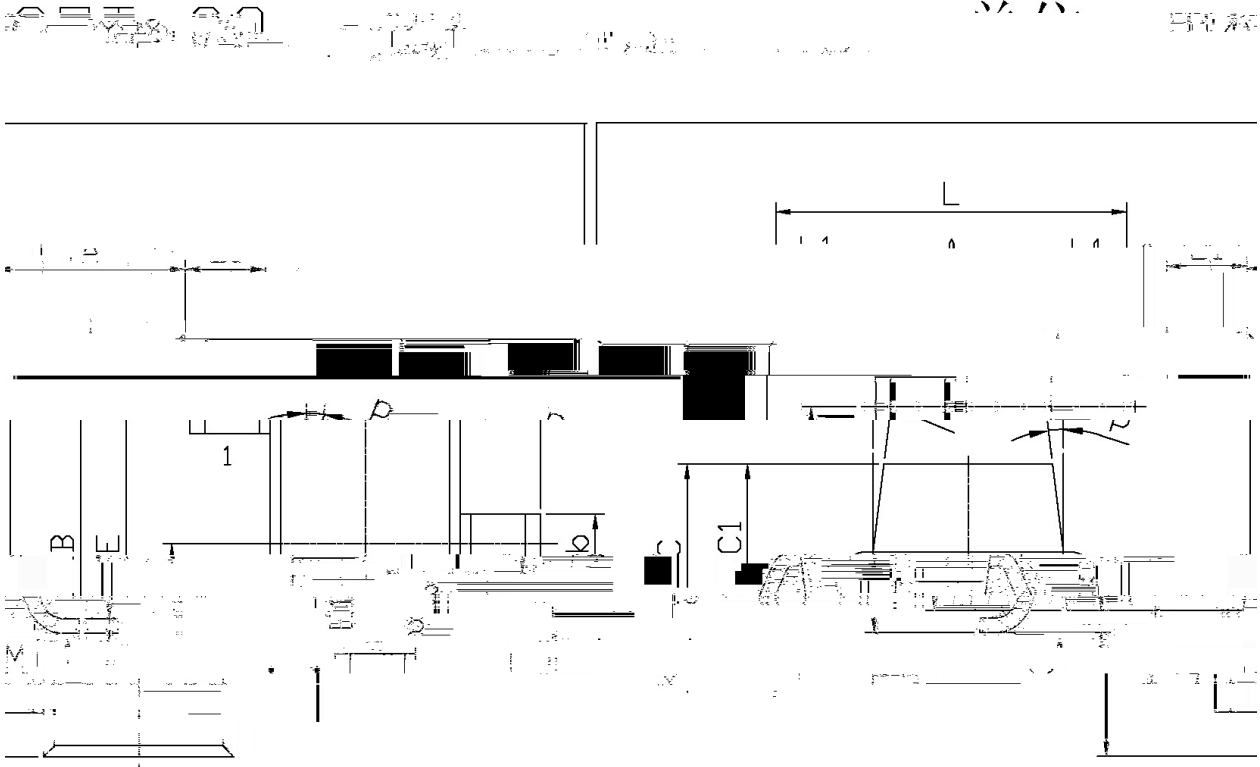


Higher-current Shunt

$$V_{out} = \left(1 + \frac{R1}{R2}\right) V_{ref}$$



/ Package Dimensions



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50		0.05	0.20
	0.10		B	2.73	3.10
	0.20MIN		E	1.70	2.10
	0.35	0.55			
					b

/ Marking Instructions



说明：

H： 为公司代码

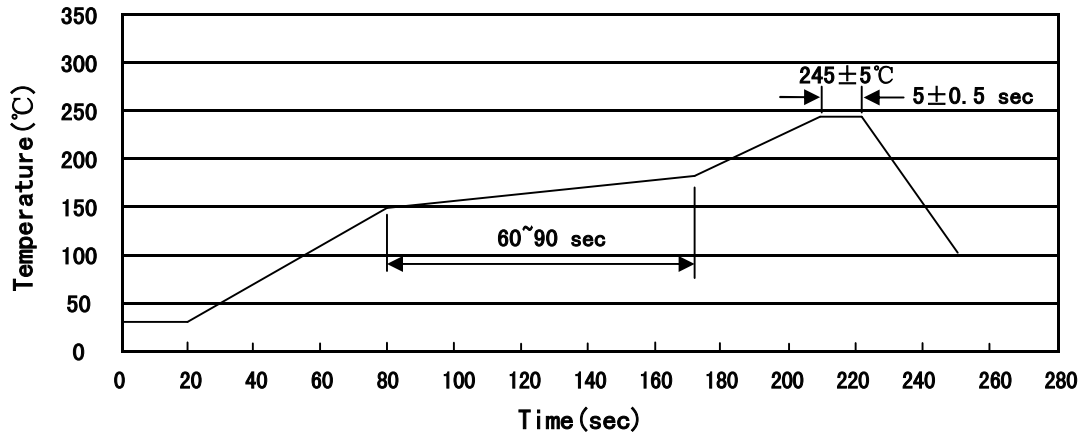
432： 为型号代码

Note:

H: Company Code

432: Product Type

( ) /



Note:

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

/ Resistance to Soldering Heat Test Conditions

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

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm <sup>3</sup> )		
	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	Outer Box
SOT-23	3,000	10	30,000	6	180,000	7" ×8	180×120×180	390×385×205

/ Notices