

/ Revised record

/ Descriptions

塑封封装精密可调基准电源。
Precision adjustable shunt regulator in a SOT-23 Plastic Package.

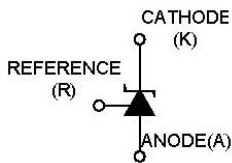
/ Features

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, 55uA typical, 0.05Ω typical output impedance, HF Product.

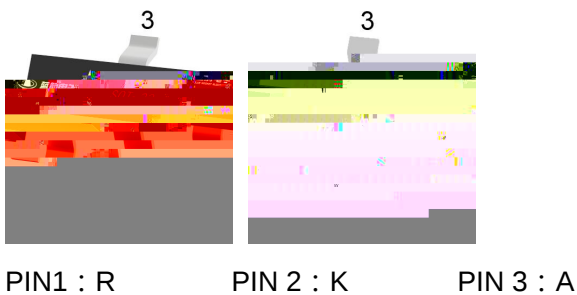
/ Applications

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



/ 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}	$I_K=10mA$ $R_1=10K\Omega$ $R_2=open$ $T_A=-40\sim 85^{\circ}C$		0.1	0.4	μA
		$I_K=10mA$ $R_1=10K$ $R_2=open$		0.15	0.4	μA
Min. cathode current	$I_{K(min)}$	$V_{KA}=V_{REF}$		55	80	μA
Off-state cathode current	$I_{K(off)}$	$V_{KA}=18V$ $V_{REF}=0V$		0.04	0.1	μA
		$V_{KA}=6V$ $V_{REF}=0V$		0.01	0.05	μA
Dynamic impedance	$ Z_{KA} $	$V_{KA}=V_{REF}$ $I_K=1mA$ to 100mA, $f\leq 1.0KHz$		0.05	0.15	Ω

/ Electrical Characteristic Curve

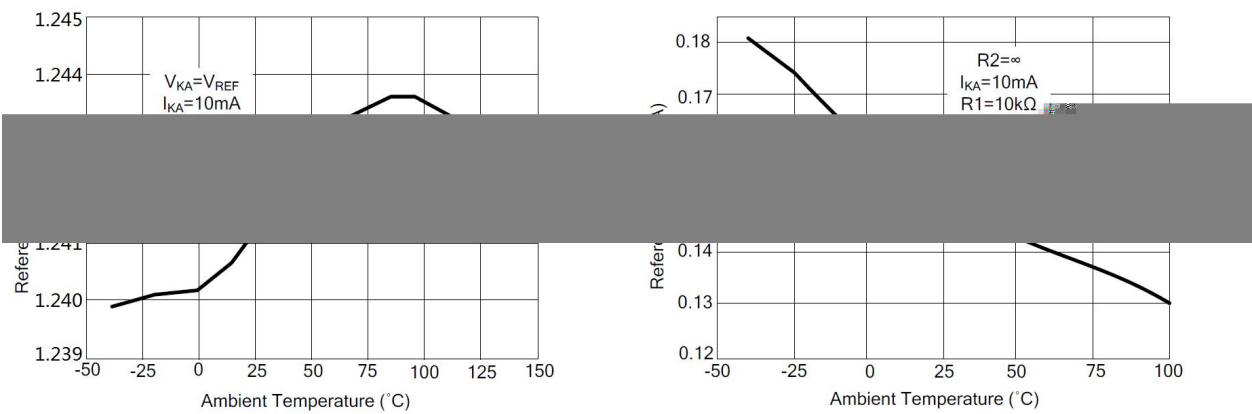
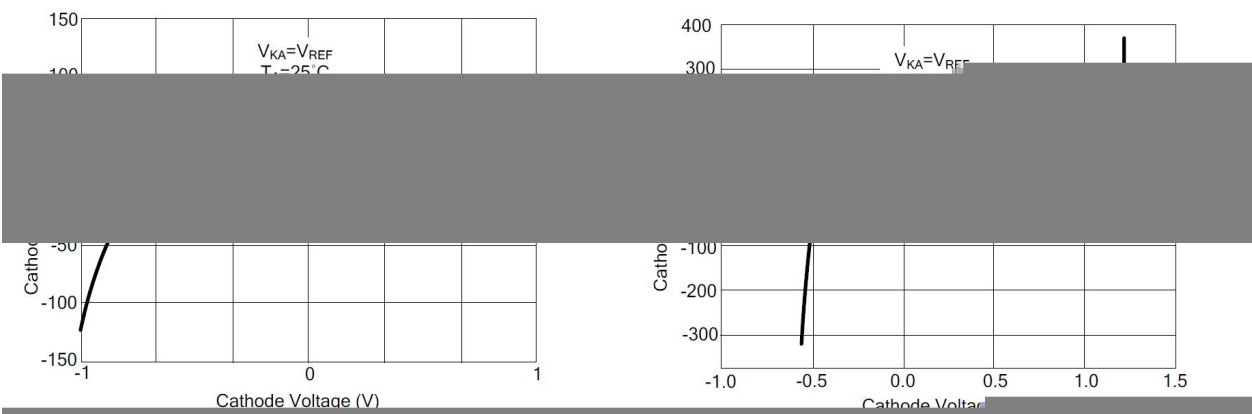


Figure 1. Reference Voltage VS. Ambient Temperature

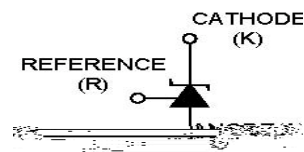
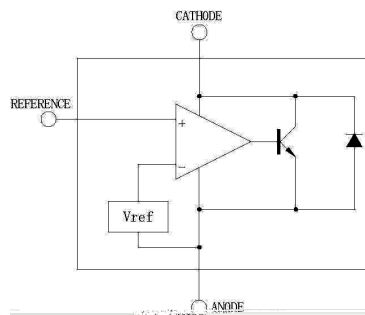
Figure 2. Reference Current VS. Ambient Temperature



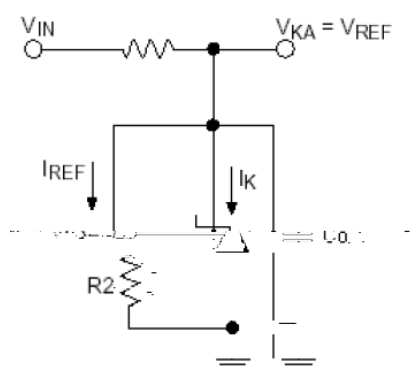


& Test circuits&Typical Application

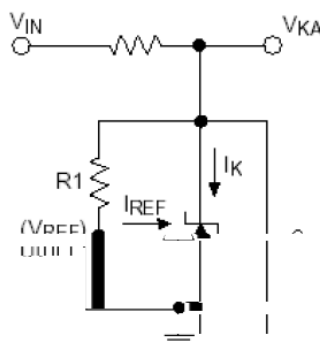
BLOCK DIAGRAM:



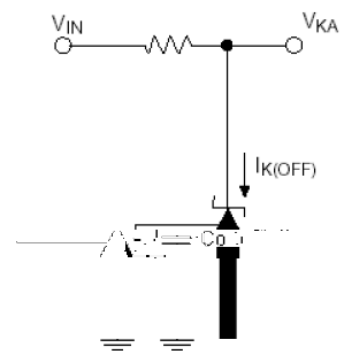
TEST CIRCUITS:



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

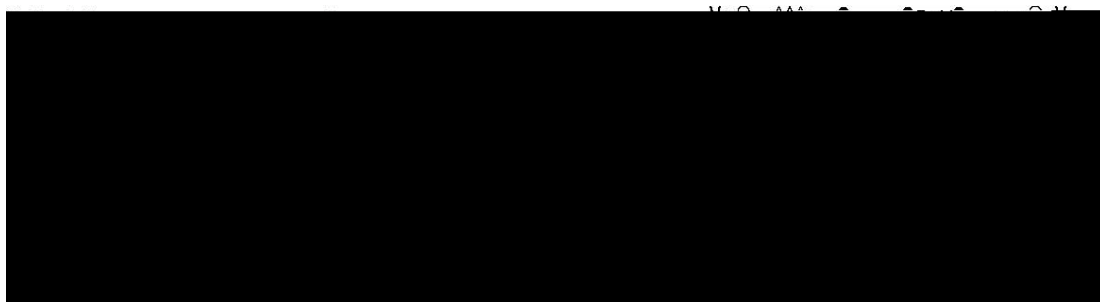


Test Circuit for $V_{KA} \geq V_{REF}$
 $C_o = 0.1\mu F$



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

TYPICAL APPLICATIONS:



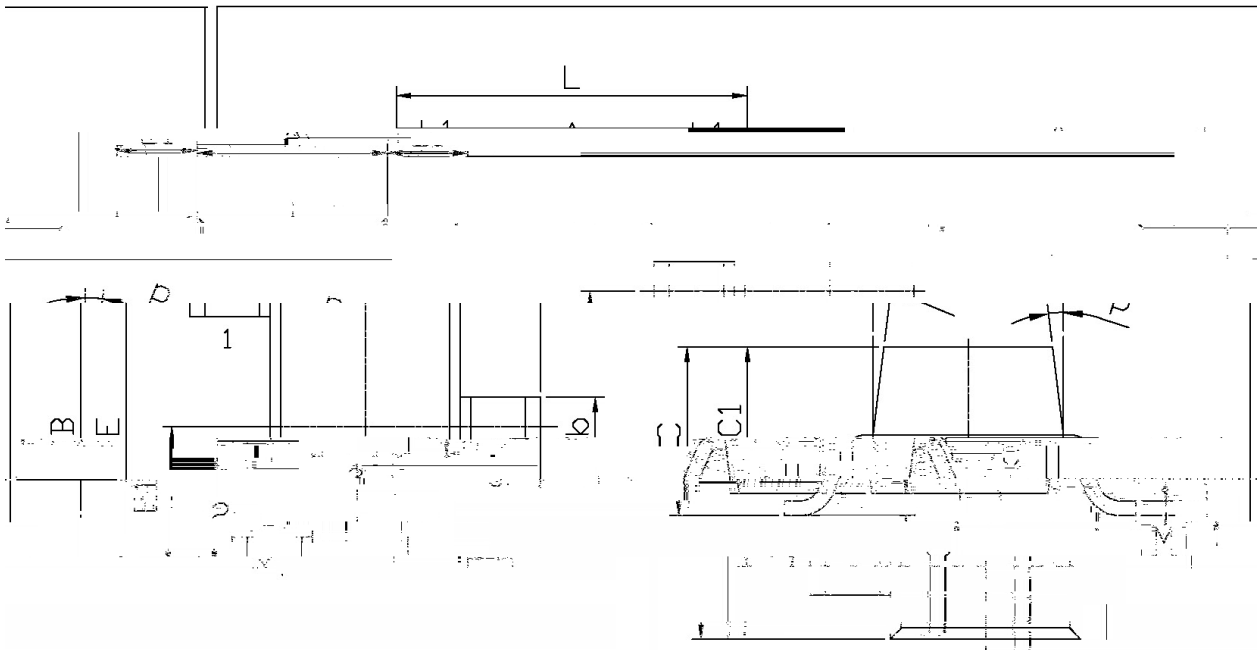
Shutdown Regulator

Higher-current Shunt



/ Package Dimensions

NOTES: 1. DIMENSIONS ARE GIVEN IN MILLIMETERS (INCHES) UNLESS OTHERWISE SPECIFIED. 2. DIMENSIONS ARE GIVEN IN MILLIMETERS (INCHES) UNLESS OTHERWISE SPECIFIED.



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	G	0.05	0.20
B	0.10	0.20	H	2.70	3.10
D	0.20	0.30	E	1.70	2.10
F	0.35	0.55	I	0.35	0.55

/ Marking Instructions



说明：

H： 为公司代码

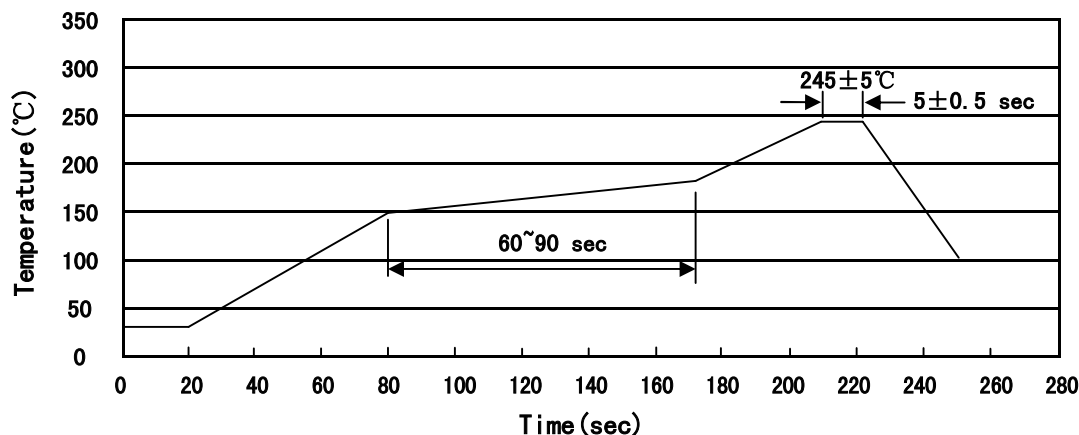
432： 为型号代码

Note:

H: Company Code

432: Product Type

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



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 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	Outer Box
SOT-23	3,000	10	30,000	6	180,000	7" ×8	180×120×180	390×385×205

/ Notices