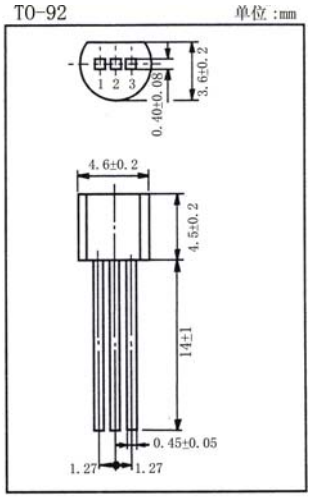
用途:用于线性调整器，可调节电源和开关电源。

Purpose: Linear regulators, adjustable power supply, switching power supply.

特点:精确参照电压2.495V;允许电压误差为0.5%,1%或2%;阴极电流能力为1.0mA～100mA;快速导通;可调节输出电压为V_0=V_{ref}～37V;阴极工作电流低(典型值:400μA);动态输出阻抗低(典型值:0.15Ω)。

Features: Precise reference voltage to 2.495V;guaranteed 0.5%,1% or 2% reference voltage Tolerance; sink current capability,1.0mA～100mA;quick turn-on; adjustableOutput voltage, V_0=V_{ref}～36V;low operational cathode current,50μA typical; 0.15Ω typical output impedance.



引脚:1.R　2.A　3.K

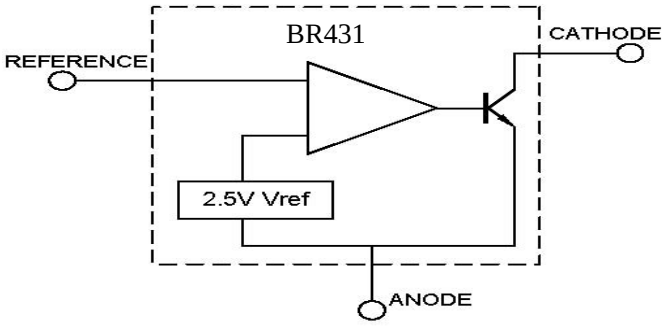
极限参数/Absolute maximum ratings(Ta=25℃)

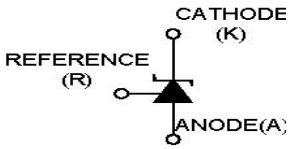
参数符号 Symbol	数值 Rating	单位 Unit
V_{KA}	37	V
I_K	-100～+150	mA
I_{REF}	0.05～+10	mA
P_D	770	mW
T_{amb}	-40～125	℃
T_j	150	℃
T_{stg}	-65～150	℃

电性能参数/Electrical characteristics(Ta=25℃)

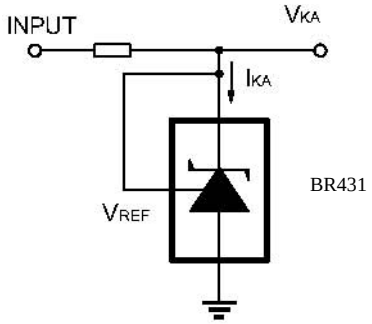
参数符号 Symbol	测试条件 Test condition	数值 Rating 最小值 Min	典型值 Typ	最大值 Max	单位 Unit
V_{REF}	V_{KA}=V_{REF}　I_K=10mA(A=0.5%)	2.483	2.495	2.507	V
	V_{KA}=V_{REF}　I_K=10mA(B=1%)	2.470	2.495	2.520	V
	V_{KA}=V_{REF}　I_K=10mA(2%)	2.445	2.495	2.545	V
△V_{REF}/T	V_{KA}=V_{REF}, I_K=10mA T_A=-25～85℃		4.5	17	mV
△V_{REF}/△V_{KA}	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
I_{REF}	I_K=10mA　R_1=10KΩ　R_2=open		1.0	4.0	μA
△I_{REF}/T	I_K=10mA　R_1=10KΩ, R_2=open　T_A=-40～125℃		0.4	1.2	μA
$I_{K(min)}$	V_{KA}=V_{REF}		0.4	1	mA
$I_{K(off)}$	V_{KA}=36V　V_{REF}=0V		0.05	1.0	μA
|Z_{KA}|	V_{KA}=V_{REF}　I_K=1mA to 100mA f≤1.0KHz		0.15	0.5	Ω

BLOCK DIAGRAM:

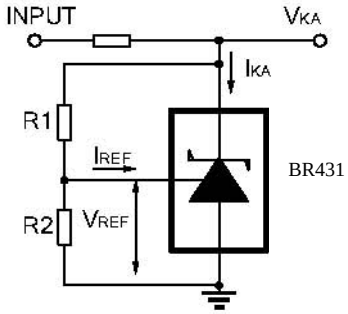




TEST CIRCUITS:

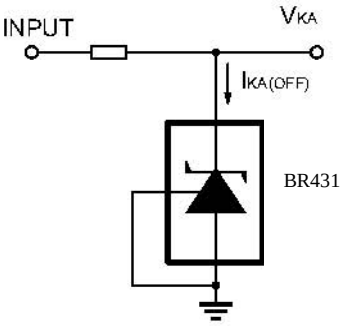


Test Circuit For VKA=VREF



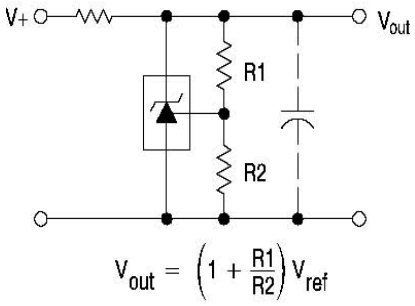
$V_{KA}=V_{REF}*(1+R1/R2)+I_{REF}*R1$

Test Circuit for VKA≥VREF

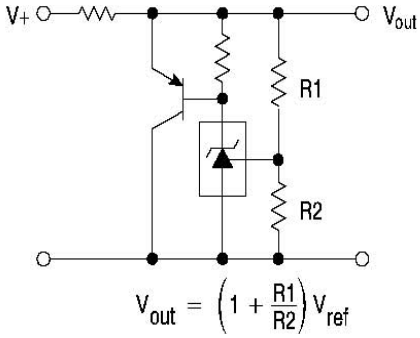


Test Circuit For IKA(OFF)

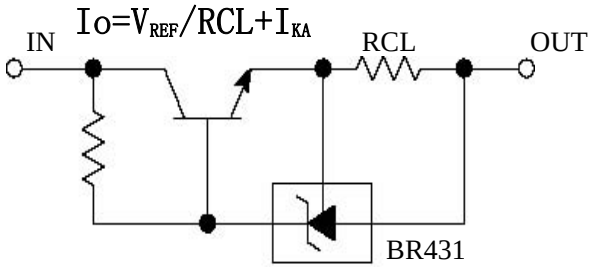
TYPICAL APPLICATION:



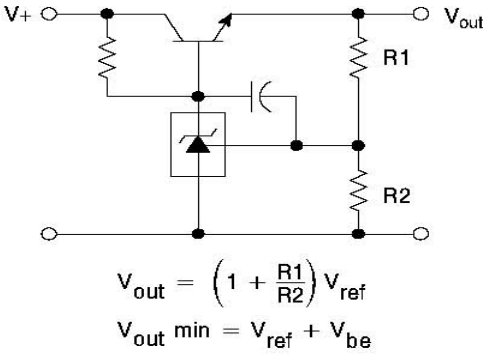
Shutdown Regulator



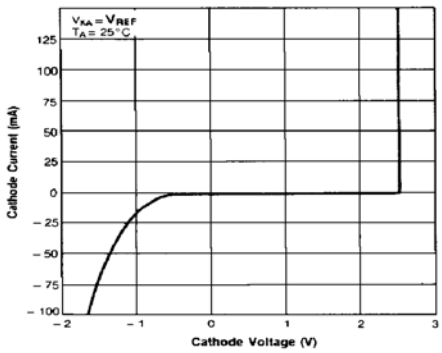
Higher-current Shunt

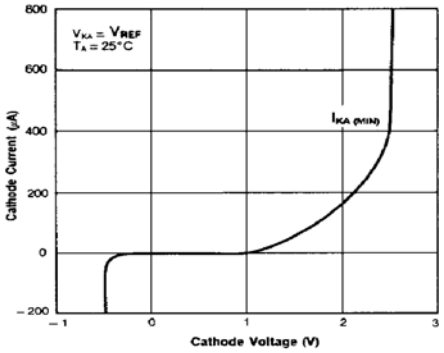


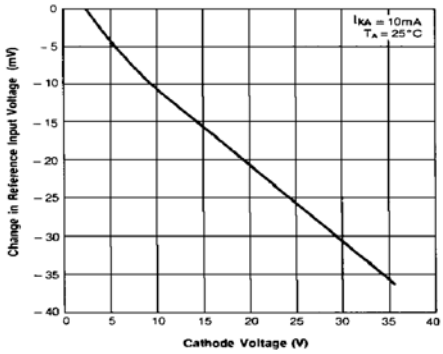
Constant Current Source

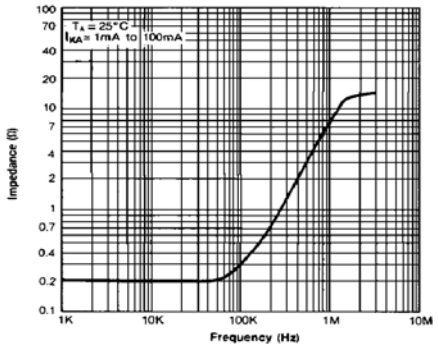


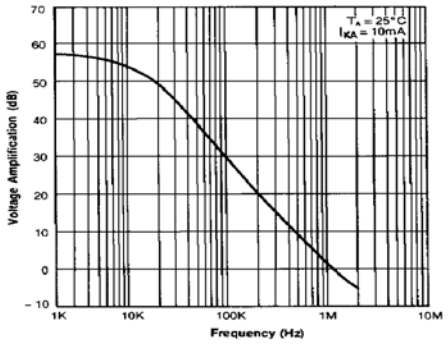
Series Pass Regulator

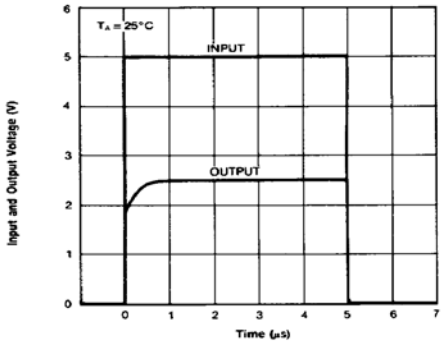

$V_{KA} = V_{REF}$
$T_A = 25°C$
Cathode Current (mA)
Cathode Voltage (V)


$V_{KA} = V_{REF}$
$T_A = 25°C$
$I_{KA(MIN)}$
Cathode Current (μA)
Cathode Voltage (V)


$I_{KA} = 10mA$
$T_A = 25°C$
Change in Reference Input Voltage (mV)
Cathode Voltage (V)


$T_A = 25°C$
$I_{KA} = 1mA$ to 100mA
Impedance (Ω)
Frequency (Hz)


$T_A = 25°C$
$I_{KA} = 10mA$
Voltage Amplification (dB)
Frequency (Hz)


$T_A = 25°C$
INPUT
OUTPUT
Input and Output Voltage (V)
Time (μs)