

LR432A LINEAR INTEGRATED CIRCUIT

PROGRAMMABLE PRECISION REFERENCE

Description

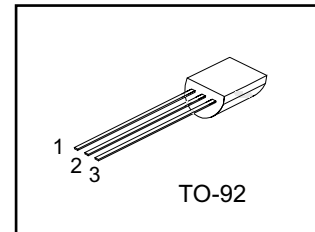
The LRC LR432A is a three-terminal adjustable regulator with a guaranteed thermal stability over applicable temperature ranges. The output voltage may be set to any value between V_{REF} (approximately 1.24V) and 18V with two external resistors. It provides very wide applications, including shunt regulator, series regulator, switching regulator, voltage reference and others.

Features:

- Precise Reference Voltage to 1.24V
- Guaranteed 1% Reference Voltage Tolerance
- Sink Current Capability, 80 μ A to 100mA
- Quick Turn-on
- Adjustable Output Voltage, $V_o = V_{REF}$ to 18V
- 0.2 Ω Typical Output Impedance

We declare that the material of product is ROHS compliant and does not contain any Br, Cl, and Sb203

LR432A



TO-92 1: Ref ; 2: Anode; 3: Cathode

LR432A LINEAR INTEGRATED CIRCUIT

Absolute Maximum Ratings

Symbol	Parameter	Rating	Unit
V_{KA}	Cathode voltage	18	V
I_K	Continuous cathode current range	100	mA
I_{REF}	Reference current range	3	mA
T_j	Operating Junction Temperature Range	150	°C
T_{opr}	Operating Ambient Temperature	- 40 to 105	°C

Electrical Characteristics $T_A = 25^\circ\text{C}$ (unless otherwise noted)

Symbol	Parameter	Test Conditions	LR432A			Unit
			Min	Typ	Max	
V_{REF}	Reference voltage	$V_{KA}=V_{REF}$, $I_K=10\text{mA}$ (Fig. 1) $T_A=25^\circ\text{C}$	1.228	1.240	1.252	V
V_{DEV}	V_{REF} Temp Deviation	$T_A=\text{full range(see Note1)}$ $V_{KA}=V_{REF}$, $I_K=10\text{mA}$ (Fig. 1)		10	25	mV
$\Delta V_{REF}/\Delta V_{KA}$	Ratio of Change in V_{REF} to Change in Cathode Voltage	$I_K=10\text{mA}$, $V_{KA}=18\text{V}$ to V_{REF} (Fig. 2)		-1	-2.7	mV / V
I_{REF}	Reference Input Current	$I_K=10\text{mA}$, $R_1=10\text{k}\Omega$ $R_2=\infty$ (Fig.2)		0.25	0.5	μA
$I_{REF(DEV)}$	I_{REF} Temp Deviation	$T_K=\text{full range (see Note 1)}$, $R_1=10\text{k}\Omega$, $R_2=\infty$, $I_K=10\text{mA}$ (Fig. 2)		0.05	0.3	μA
$I_k(\text{off})$	Off-state cathode current	$V_{REF}=0\text{ V, (Fig.3)}$ $V_K=18\text{V}$		0.04	0.5	μA
Z_{ka}	Dynamic Output Impedance	$V_{ka}=V_{ref}$, $I_k=1\text{mA}$ to 100mA $F \leq 1\text{kHz}$ (Fig. 1)		0.2	0.4	Ω
$I_K(\text{MIN})$	Minimum Operating Current	$V_{KA}=V_{REF}$ (Fig. 1)		60	80	μA

LR432A LINEAR INTEGRATED CIRCUIT

TEST CIRCUITS

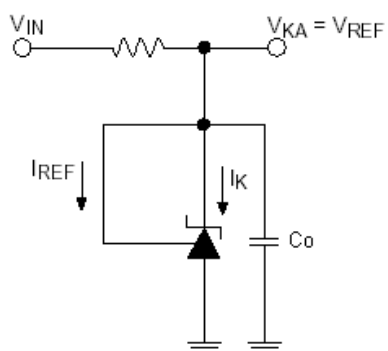


Fig.1 Test Circuit for $V_{ka}=V_{ref}$,
 $V_o=V_{ka}=V_{ref}$, $C_o=0.1\mu F$

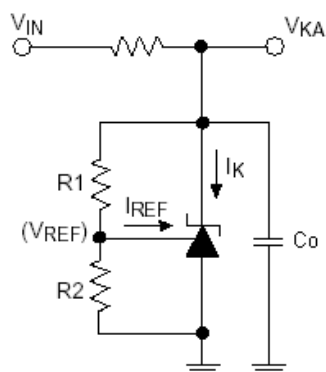


Fig.2 Test Circuit for $V_{ka}>V_{ref}$,
 $V_o=V_{ka}=V_{ref}\cdot(1+R_1/R_2)+I_{ref}\cdot R_1$,
 $C_o=0.1\mu F$

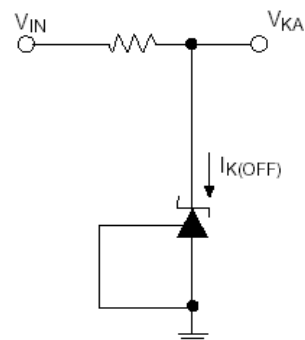
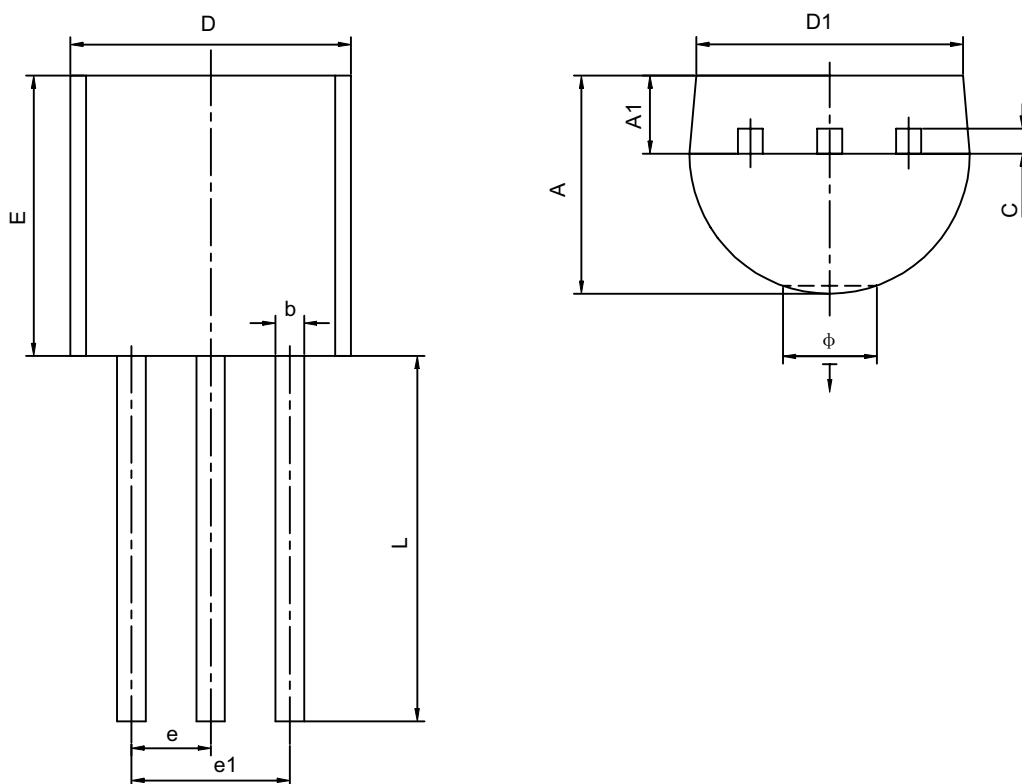


Fig.3 Test Circuit for $I_{k(off)}$

LR432A LINEAR INTEGRATED CIRCUIT

TO-92 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.400	4.700	0.173	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270TYP		0.050TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
ϕ		1.600		0.063
τ	0.000	0.380	0.000	0.015