

SOT-23 Encapsulate Adjustable Reference Source

TL432 Adjustable Accurate Reference Source

FEATURES

- Precise Reference Voltage to 1.24V
- Guaranteed 0.5% Reference Voltage
- Tolerance Sink Current
- Capability, 80uA to 100mA Quick Turn-on
- Adjustable Output voltage, $V_O = V_{REF}$ to 20V

SOT-23



- 1、REFERENCE
- 2、CATHODE
- 3、ANODE

ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	SYMBOL	VALUE	UNITS
Cathode Voltage	V_{KA}	20	V
Cathode Current Range (Continuous)	I_{KA}	100	mA
Reference Input Current Range	I_{REF}	3	mA
Power Dissipation	P_D	350	mW
Operating temperature	T_{opr}	0-70	°C
Storage temperature Range	T_{stg}	-65-+150°C	°C

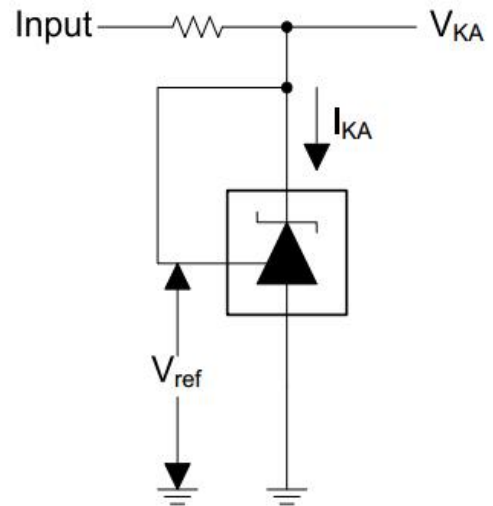
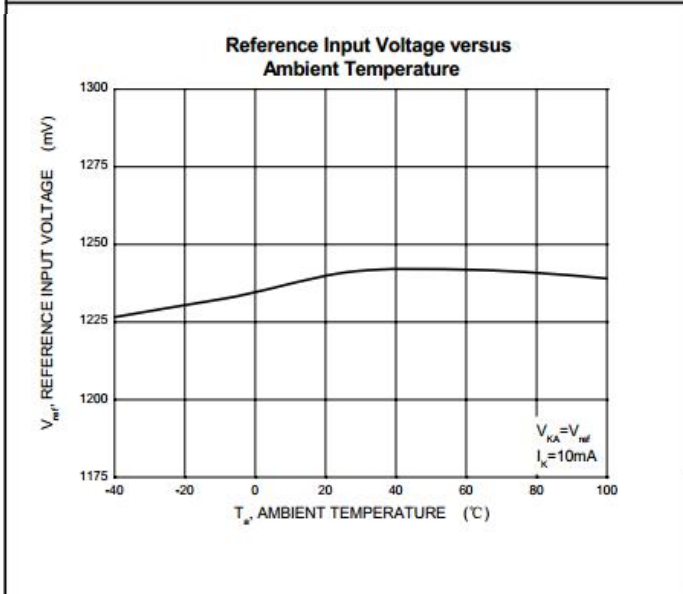
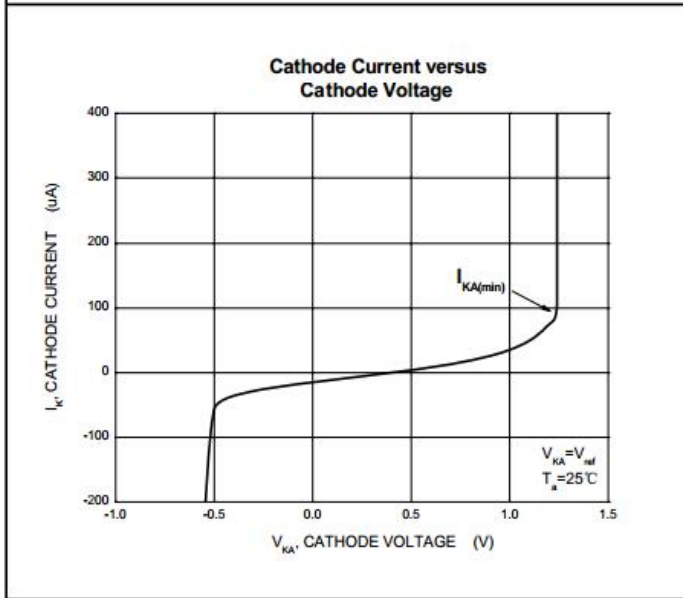
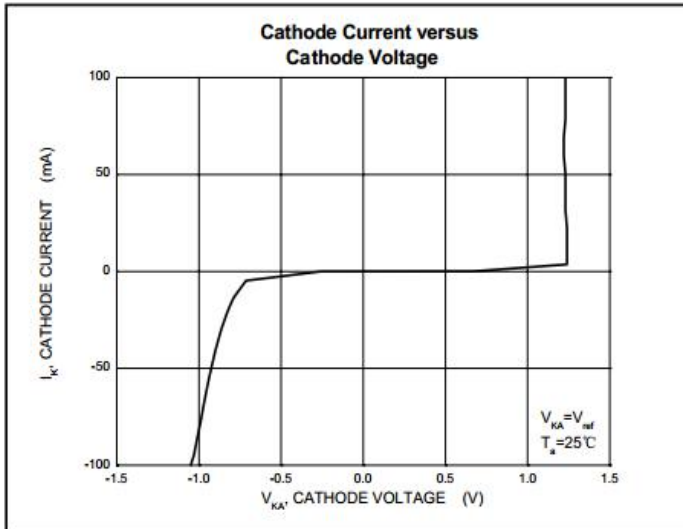
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Reference Voltage	V_{REF}	$V_{ka}=V_{ref}, I_k=10\text{mA}$ ($T_a=25^\circ\text{C}$)	1.234	1.240	1.246	V
V_{REF} Temp Deviation	V_{DEV}	$T_a=\text{full range}$ $V_{ka}=V_{ref}, I_k=10\text{mA}$		10	25	mV
Ratio of Change in V_{REF} to Change in Cathode Voltage	$\Delta V_{REF} / \Delta V_{KA}$	$I_k=10\text{mA}$ $V_{ka}=20\text{V to } V_{ref}$		-1	-2.7	mV / V
Reference Input Current	I_{REF}	$I_{KA}=10\text{mA}$ $R_1=10\text{K}\Omega R_2=\infty$		0.25	0.5	μA
I_{REF} Temp Deviation	$I_{REF(DEV)}$	$I_{KA}=10\text{mA}$, $R_1=10\text{K}\Omega R_2=\infty T_A=\text{full Temperature}$		0.05	0.3	μA
Off-state cathode current	$I_{K(off)}$	$V_{REF}=0\text{V}$ $V_k=20\text{V}$		0.04	0.5	μA
Dynamic Output Impedance	Z_{ka}	$V_{ka}=V_{ref}$ $I_k=1\text{mA to } 100\text{mA}$		0.2	0.4	Ω
Minimum Operating Current	$I_{K(MIN)}$	$V_{ka}=V_{ref}$		60	80	μA

Note: $T_{MIN}=0^\circ\text{C}$, $T_{MAX}=+70^\circ\text{C}$ CLASSIFICATION OF V_{ref}

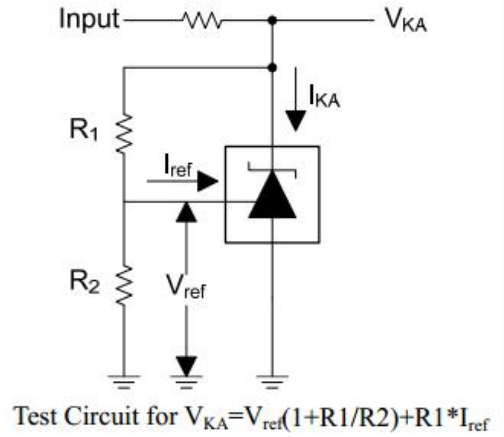
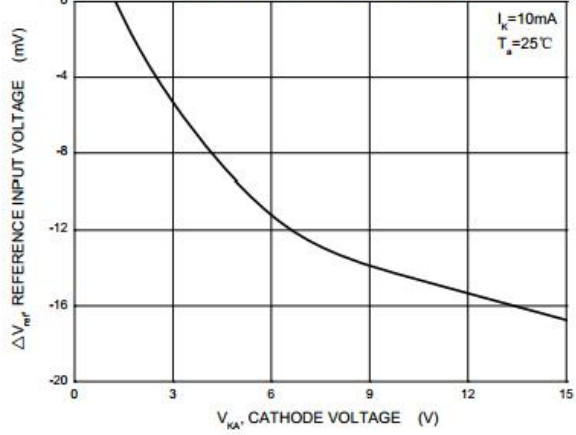
Rank	0.5%	1%
Range	1.234-1.246	1.228-1.252

Typical Characteristics

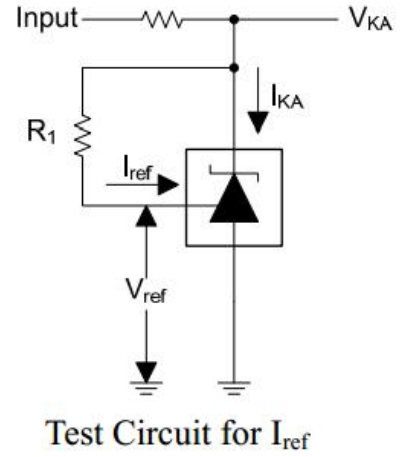
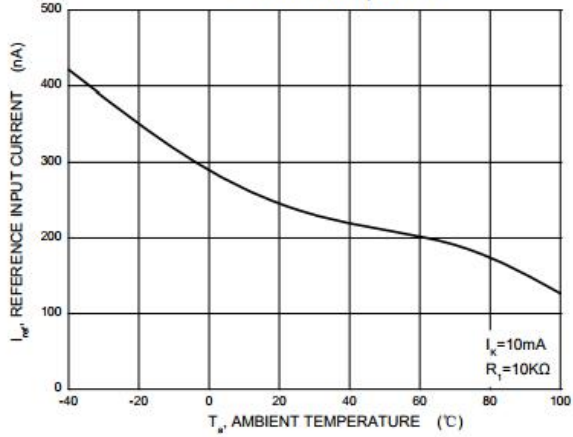


Test Circuit for $V_{KA} = V_{ref}$

Change in Reference Input Voltage versus Cathode Voltage



Reference Input Current versus Ambient Temperature



Off-State Cathode Current versus Ambient Temperature

