

TO-92 Encapsulate Adjustable Reference Source

CJ432 Adjustable Accurate Reference Source

DEVICE DESCRIPTION

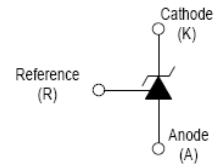
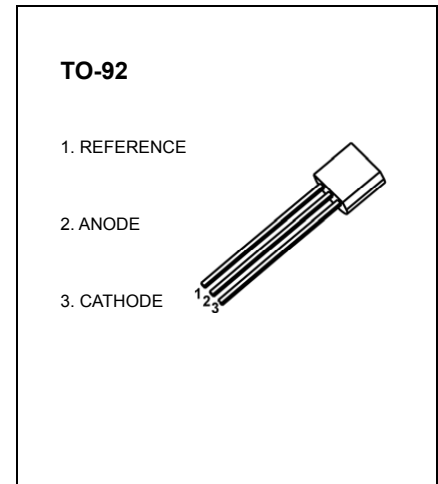
The CJ432 is a three-terminal Shunt Voltage Reference providing a highly accuracy 1.24V. The CJ432 thermal stability and wide operating current, makes is sritable for all variety of applications that are looking for a low cost solution with high performance.

FEATURES

- Low dynamic output impedance
- The effective temperature compensation in the working range of full temperature
- Low output noise voltage
- Fast on -state response
- Sink current capability of 0.1mA to100mA

APPLICATION

- Shunt Regulator
- High-Current Shunt Regulator
- Precision Current Limiter



ABSOLUTE MAXIMUM RATINGS (Operating temperature rangeapplies unless otherwise specified)

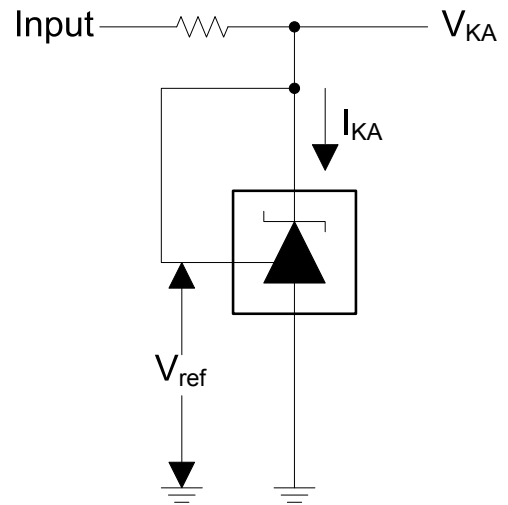
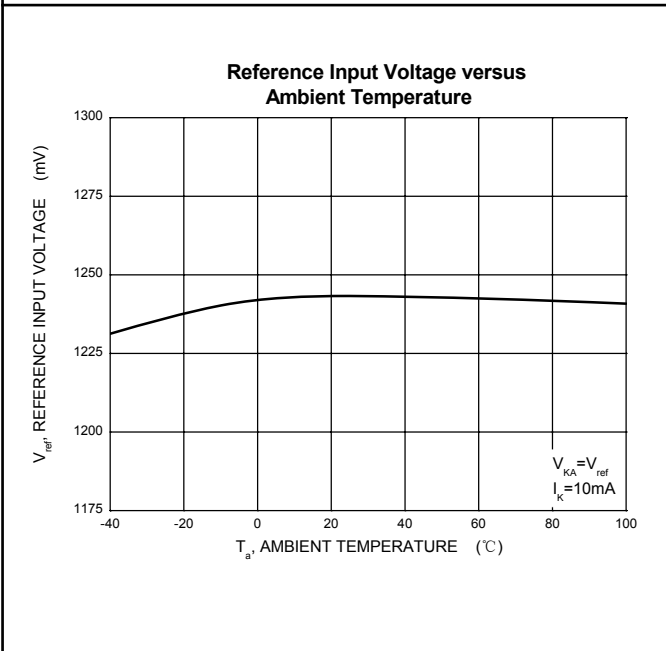
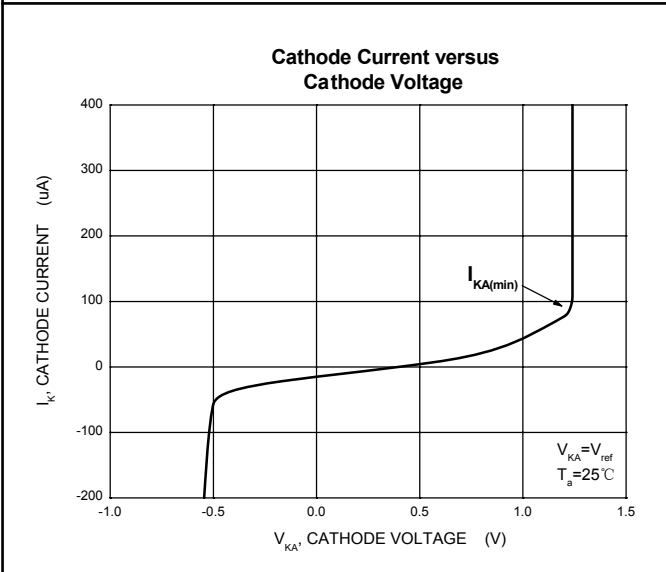
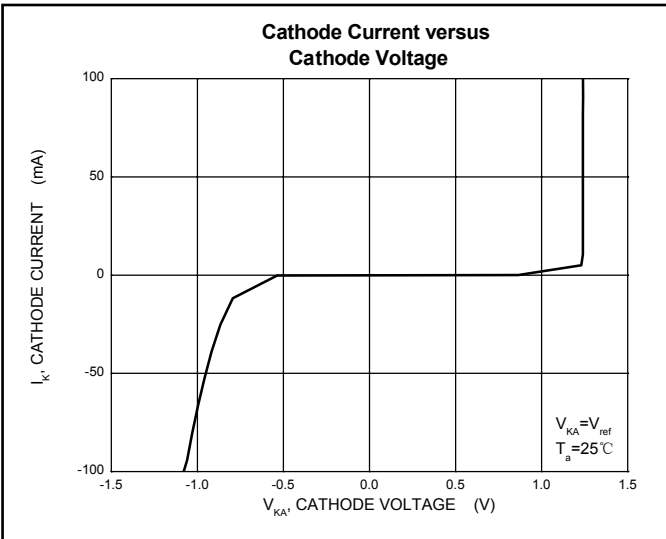
Parameter	Symbol	Value	Unit
Cathode Voltage	V_{KA}	18	V
Cathode Current Range (continuous)	I_{KA}	100	mA
Reference Input Current Range	I_{ref}	6	μA
Power Dissipation	P_D	500	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	250	$^{\circ}C/W$
Operating Temperature	T_{opr}	$\epsilon \sim +i \epsilon$	$^{\circ}C$
Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature	T_{stg}	-65~+150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reference input voltage (Fig 1)	V _{ref}	V _{KA} =V _{REF} , I _{KA} =10mA	1.2214		1.2586	V
Deviation of reference voltage over full temperature range (Fig 1)	ΔV _{ref(DEV)}	V _{KA} =V _{REF} , I _{KA} =10mA 0°C≤T _a ≤70°C			16	mV
Ratio of change in reference input voltage to the change in cathode voltage (Fig 2)	ΔV _{ref} /ΔV _{KA}	I _{KA} =10mA, ΔV _{KA} =1.25V~15V			2.4	mV/V
Deviation of reference input current over full temperature range (Fig 2)	ΔI _{ref} /ΔT	I _{KA} =10mA, R ₁ =10KΩ, R ₂ =∞, 0°C≤T _a ≤70°C			0.6	μA
Minimum cathode current for regulation (Fig 1)	I _{KA(min)}	V _{KA} =V _{REF}			0.1	mA
Off-state cathode current (Fig 3)	I _{off}	V _{KA} =15V, V _{REF} =0			0.5	μA
Dynamic impedance	Z _{KA}	V _{KA} =V _{REF} , I _{KA} =0.1~20mA, f≤1.0kHz			0.5	Ω

CLASSIFICATION of V_{ref}

Rank	1%	1.5%
Range	1.2776~1.2524	1.2214~1.2586



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

