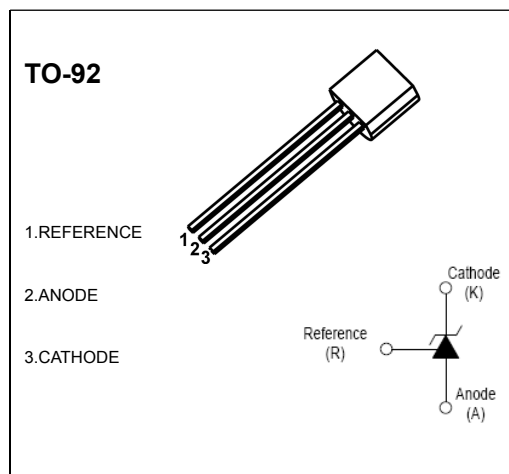


TO-92 Encapsulate Adjustable Reference Source

CJ431 Adjustable Accurate Reference Source

FEATURES

- The output voltage can be adjusted to 36V
- Low dynamic output impedance ,its typical value is 0.2Ω
- Trapping current capability is 1 to 100mA
- The typical value of the equivalent temperature factor in the whole temperature scope is 50 ppm/°C
- The effective temperature compensation in the working range of full temperature
- Low output noise voltage
- Fast on -state response



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

Parameter	Symbol	Value	Unit
Cathode Voltage	V_{KA}	37	V
Cathode Current Range (Continuous)	I_{KA}	-100~+150	mA
Reference Input Current Range	I_{ref}	0.05~+10	mA
Power Dissipation	P_D	770	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	162	°C/W
Operating Ambient Temperature Range	T_{opr}	0~+70	°C
Storage Temperature Range	T_{stg}	-65~+150	°C
Operating Junction Temperature	T_j	150	°C

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reference Input Voltage (Fig.1)	V_{ref}	$V_{KA}=V_{REF}$, $I_{KA}=10mA$	2.450	2.5	2.550	V
Deviation of Reference Input Voltage Over Temperature (note) (Fig.1)	$\Delta V_{ref}/\Delta T$	$V_{KA}=V_{REF}$, $I_{KA}=10mA$ $T_{min} \leq T_a \leq T_{max}$		4.5	17	mV
Ratio Of Change in Reference Input Voltage to the Change in Cathode Voltage (Fig.2)	$\Delta V_{ref}/\Delta V_{KA}$	$I_{KA}=10mA$ $\Delta V_{KA}=10V \sim V_{REF}$		-1.0	-2.7	mV/V
		$\Delta V_{KA}=36V \sim 10V$		-0.5	-2.0	mV/V
Reference Input Current (Fig.2)	I_{ref}	$I_{KA}=10mA$, $R_1=10k\Omega$ $R_2=\infty$		1.5	4	μA
Deviation Of Reference Input Current Over Full Temperature Range (Fig.2)	$\Delta I_{ref}/\Delta T$	$I_{KA}=10mA$, $R_1=10k\Omega$ $R_2=\infty$ T_A =full Temperature		0.4	1.2	μA
Minimum Cathode Current for Regulation(Fig.1)	$I_{KA(min)}$	$V_{KA}=V_{REF}$		0.45	1.0	mA
Off-state Cathode Current(Fig.3)	$I_{KA(OFF)}$	$V_{KA}=36V$, $V_{REF}=0$		0.05	1.0	μA
Dynamic Impedance	Z_{KA}	$V_{KA}=V_{REF}$, $I_{KA}=1$ to 100mA $f \leq 1.0kHz$		0.15	0.5	Ω

Note: $T_{MIN}=0^\circ C$, $T_{MAX}=+70^\circ C$

CLASSIFICATION of V_{ref}

Rank	0.5%	1%
Range	2.487-2.513	2.475-2.525