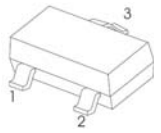
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOT-23-3L Encapsulate Adjustable Reference Source

CJ431 Adjustable Accurate Reference Source

SOT-23-3L



1.REFERENCE

2.CATHODE

3.ANODE

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/℃
- 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	Iref	0.05-+10	mA
Power Dissipation	P_D	350	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	℃/W
Operating Ambient Temperature Range	T_{opr}	0~+70	℃
Storage temperature Range	Tstg	-65~+150	℃
Operating JunctionTemperature	T_j	150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Reference Input Voltage	V_{ref}	$V_{KA}=V_{REF}$, I_{KA}=10mA		2.450	2.5	2.550	V
Deviation of Reference Input Voltage Over Temperature (note)	$\triangle V_{ref}/\triangle T$	$V_{KA}=V_{REF}$, I_{KA}=10mA Tmin≤Ta≤Tmax			4.5	17	mV
Ratio Of Change in Reference Input Voltage to the Change in Cathode Voltage	$\triangle V_{ref}/\triangle V_{KA}$	I_{KA}=10mA	$\triangle V_{KA}$ =10V~V_{REF}		-1.0	-2.7	mV/V
			$\triangle V_{KA}$ =36V~10V		-0.5	-2.0	mV/V
Reference Input Current	I_{ref}	I_{KA}= 10mA,R_1=10kΩ R_2=∞			1.5	4	μA
Deviation Of Reference Input Current Over Full Temperature Range	$\triangle I_{ref}/\triangle T$	I_{KA}=10mA, R_1=10kΩ R_2=∞ T_A=full Temperature			0.4	1.2	μA
Minimum Cathode Current for Regulation	$I_{KA(min)}$	$V_{KA}=V_{REF}$			0.45	1.0	mA
Off-state Cathode Current	$I_{KA(OFF)}$	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≤1.0kHz			0.15	0.5	Ω

Note:T_{MIN}=0℃ ,T_{MAX}=+70℃

CLASSIFICATION OF V_{ref}

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

D,Nov,2012