TL431

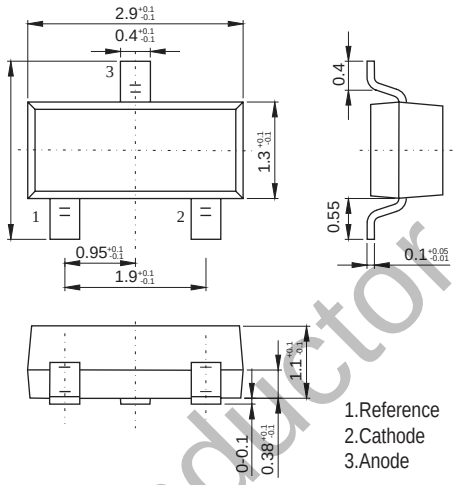
Features:

- ☐ The output voltage can be adjusted to 36V
- ☐ Low dynamic output impedance, its typical value is 0.2 Ω
- ☐ 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

RoHS COMPLIANT

SOT-23

Unit: mm



■ Absolute Maximum Ratings (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Rating	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	350	mW
Operating Temperature	T_{OPR}	0 ～ 70	℃
Storage Temperature Range	T_{STG}	-65 ～ +150	℃

■ Electrical Characteristics (Ta = 25℃ unless otherwise specified)

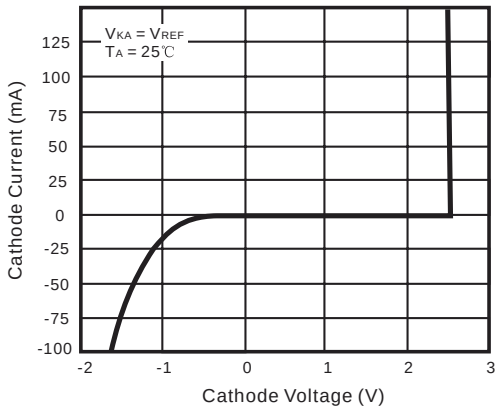
Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Reference Input Voltage	V_{REF}	$V_{KA} = V_{REF}$, I_{KA} = 10mA	2.45	2.5	2.55	V
Deviation of Reference Input Voltage Over Temperature *	$\triangle V_{REF}/\triangle T$	$V_{KA} = V_{REF}$, I_{KA} = 10mA $T_{min} \leqslant T_a \leqslant T_{max}$		4.5	17	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
		I_{KA} = 10mA , $\triangle V_{KA}$ = 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

* T_{MIN} = 0℃ , T_{MAX} = +70℃

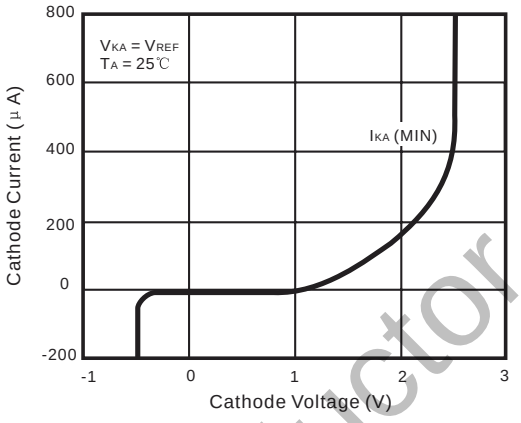
■ Classification Of V_{REF}

Rank	0.3%	0.5%	1%	2%
Rangfe	2.493~2.508	2.487~2.512	2.475~2.525	2.450~2.550

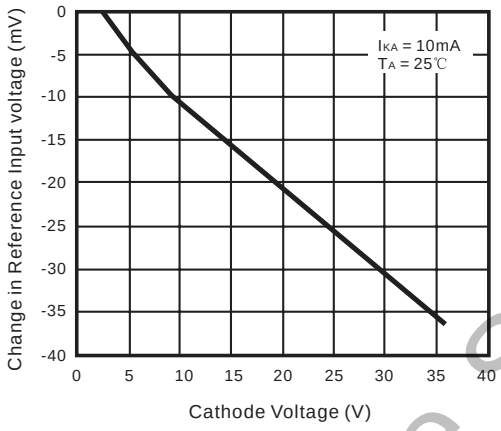
Typical Characteristics



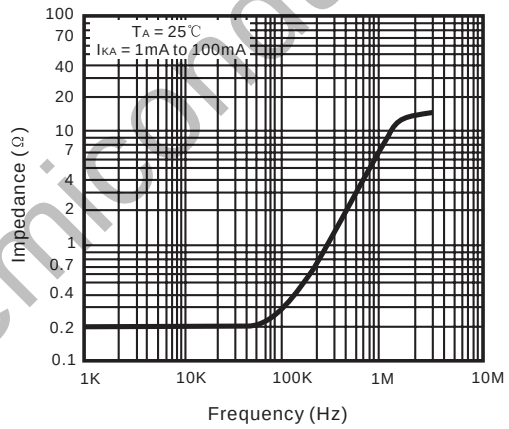
Cathode Current vs. Cathode Voltage



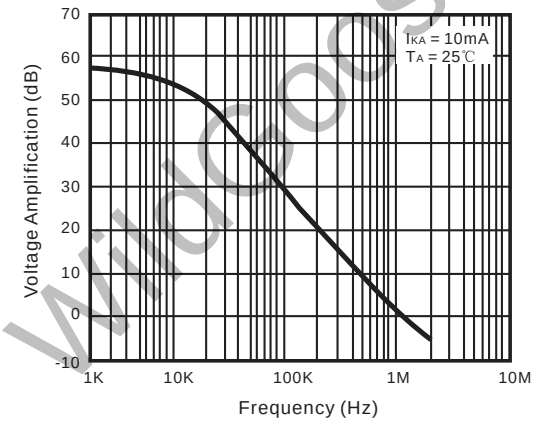
Cathode Current vs. Cathode Voltage



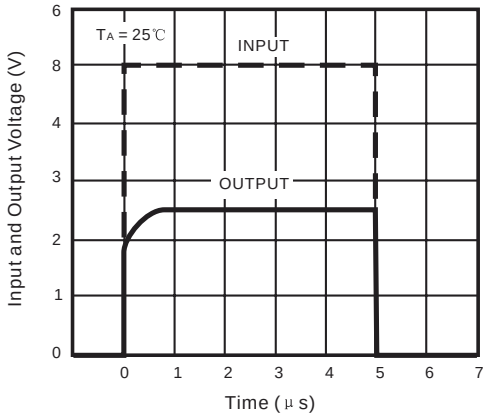
Change in Reference Input Voltage vs. Cathode Voltage



Dynamic Impedance Frequency



Small Signal Voltage Amplification vs. F



Pulse Response

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Voltage References ***category:***

Click to view products by Wild Goose ***manufacturer:***

Other Similar products are found below :

5962-8686103XC LT1021DCS8-5PBF LT1236AIS8-10PBF LTC6655CHMS8-2.048PBF MSB-T REF01J/883 LM4040B25QFTA NJM2823F-TE1 EL5226IR EL5326IR EL5326IRZ ISL21007DFB825Z ISL21009BFB812Z ISL21009CFB812Z ISL60002BIH312 TS3320AMR TS3325AMR TS3330AMR TS3333AMR X60003CIG3-41 X60003DIG3Z-41T1 X60250V8I REF3025TB-GT3 SC432BVSNT1G TL431CPG ADR4520ARZ-R7 ADR4533BRZ-R7 LT1027CCS8-5#TRPBF REF35102QDBVR AD587KRZ-REEL ADR425ARZ-REEL7 CA-HP6025S CA-HP6041S JTL431A TLVH431NAQDBZRR REF2033QDDCRQ1 REF35330QDBVR LT1236BCS8-5#TRPBF ADR435BRMZ-REEL7 CA-HP6050S TL431 BR431RM MSR025 MC1403BN LM285Z-2.5 LM385B-ADJ LM385B-2.5 HT385R-1.2 HT336R-2.5 RS3450XH6-Q1