

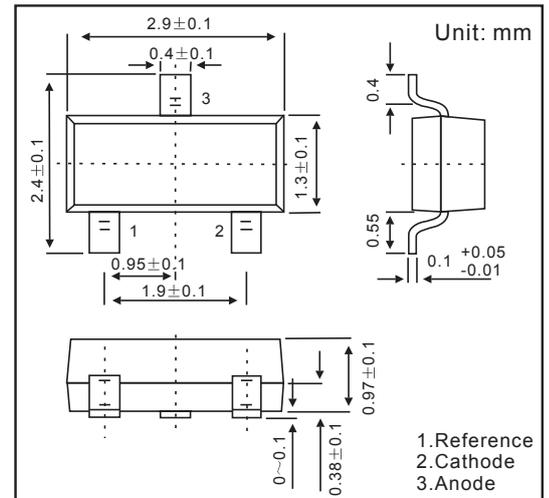
SOT-23 Adjustable Accurate Reference Source

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

MECHANICAL DATA

- Case: SOT-23 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any



MAXIMUM RATINGS AND CHARACTERISTICS

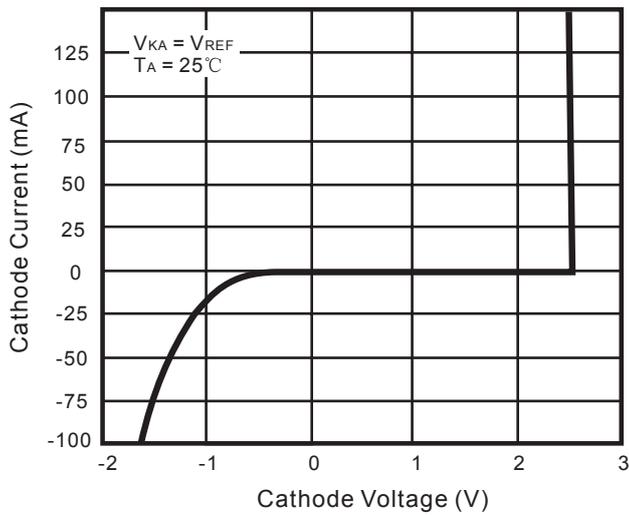
@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Cathode Voltage	V_{KA}	40	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}	-40 ~ +125	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

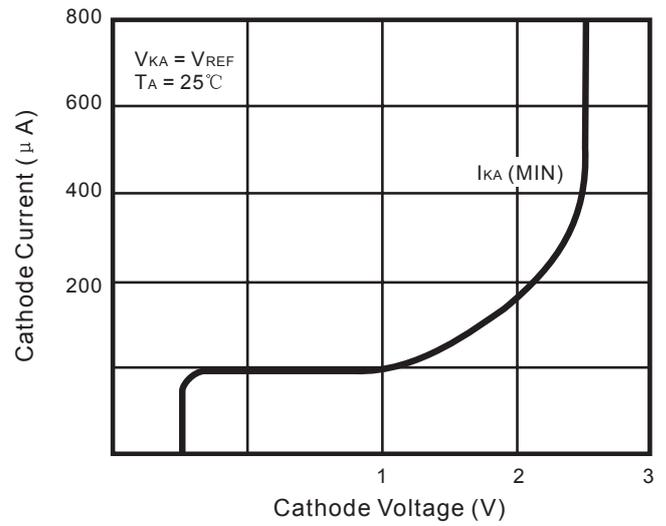
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reference Input Voltage	V_{REF}	$V_{KA} = V_{REF}, I_{KA} = 10mA$	2.45	2.5	2.55	V
Deviation of Reference Input Voltage Over Temperature (*)	$\Delta V_{REF}/T \Delta$	$V_{KA} = V_{REF}, I_{KA} = 10mA$ $T_{min} \leq T_a \leq T_{max}$		4.5	17	mV
Ratio of Change in Reference Input Voltage to the Change in Cathode Voltage	$\Delta V_{REF}/V_{KA} \Delta$	$I_{KA} = 10mA, V_{KA} = 10V \sim V_{REF}$		-1.0	-2.7	mV/V
		$I_{KA} = 10mA, V_{KA} = 36V \sim 10V$		-0.5	-2.0	mV/V
Reference Input Current	I_{REF}	$I_{KA} = 10mA, R_1 = 10K\Omega, R_2 = \infty$		1.5	4	uA
Deviation of Reference Input Current Over Full Temperature Range	$\Delta I_{REF}/T \Delta$	$I_{KA} = 10mA, R_1 = 10K\Omega, R_2 = \infty$ $T_A = \text{Full Temperature}$		0.4	1.2	uA
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	uA
Dynamic Impedance	Z_{KA}	$V_{KA} = V_{REF}, I_{KA} = 1 \text{ to } 100mA,$ $f \leq 1.0KHz$		0.15	0.5	Ω

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

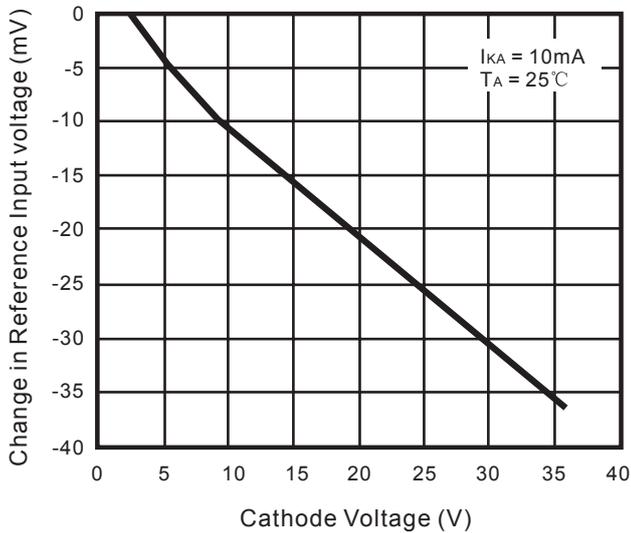
RATINGS AND CHARACTERISTIC CURVES



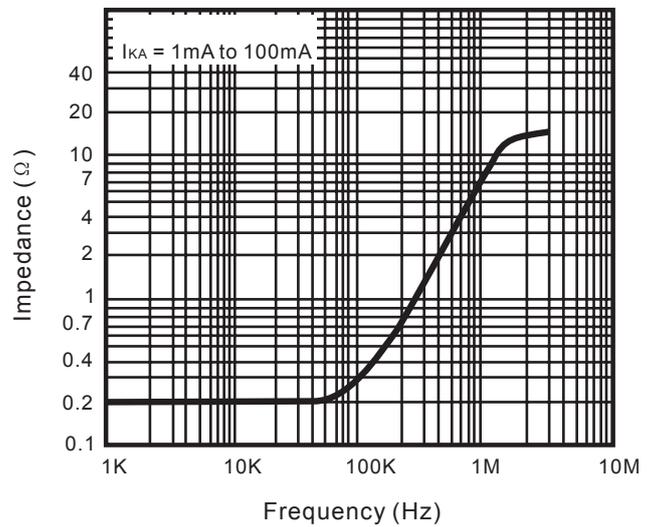
Cathode Current vs. Cathode Voltage



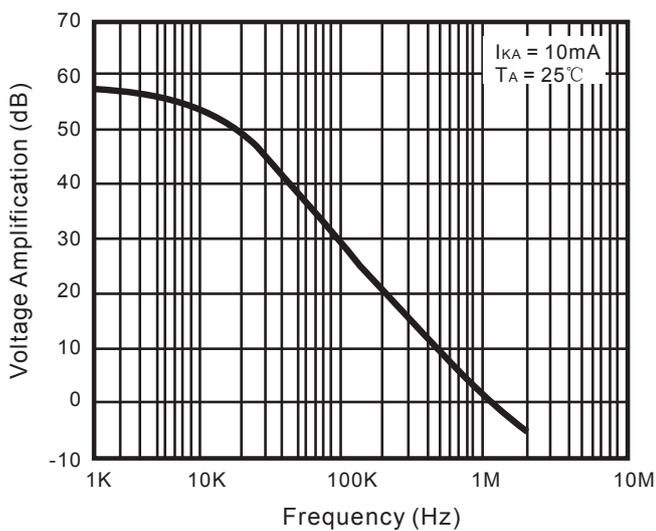
Cathode Current vs. Cathode Voltage



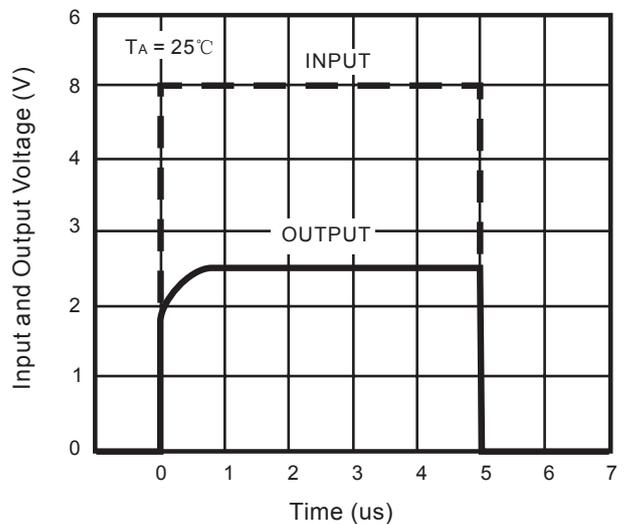
Change in Reference Input Voltage vs. Cathode Voltage



Dynamic Impedance Frequency



Small Signal Voltage Amplification vs. Frequency



Pulse Response