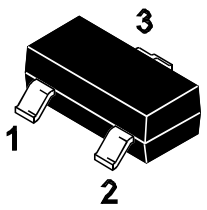
ASPL432A
Programmable Precision Reference

Features

- Low dynamic output impedance.
- Sink current capability of 1 to 100mA.
- Low output noise voltage
- Fast turn on response

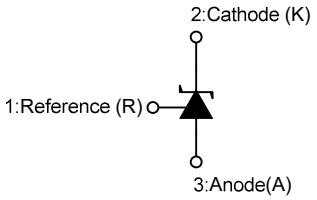
SOT23



1. Reference 2.Cathode 3.Anode

Application

- It provides very wide applications, including shunt regulator,series regulator,switching regulator,voltage reference and others.



Absolute Maximum Ratings (Ta=25°Cunless otherwise specified)

Parameter	Symbol	Value	Units
Cathode Voltage	V_{KA}	20	V
Cathode Current Range(Continuous)	I_{KA}	-100 ~ +100	mA
Reference Input Current Range	I_{REF}	10	mA
Maximum Power Dissipation	P_D	350	mW
Typical Thermal Resistance	$R_{\theta JA}$	130	°C/W
Operating Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

Recommended Operating Conditions

Parameter	Symbol	Min.	Max.	Units
Cathode Voltage	V_{KA}	V_{REF}	18	V
Cathode Current	I_{KA}	0.1	100	mA
Operating Ambient Temperature Range	T_{OPR}	-40	125	°C

Electrical Characteristics (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test Conditions		Min.	Typ.	Max.	Unit
Reference Input Voltage Fig1	V_{REF}	$V_{KA}=V_{REF}$, $I_{KA}=10mA$	ASPL432A(1%)	1.238	1.25	1.262	V
			ASPL432AC(0.5%)	1.244	1.25	1.256	V
Deviation of Reference Input Voltage Over Temperature Fig1	ΔV_{REF}	$V_{KA}=V_{REF}$, $I_{KA}=10mA$	0°C ≤T_A≤70°C	--	2	10	mV
			-20°C ≤T_A≤125°C	--	3	15	mV
			-40°C ≤T_A≤125°C	--	8	25	mV
Ratio of Change in Reference Input Voltage to The Change in Cathode Voltage Fig2	$\frac{\Delta V_{REF}}{\Delta V_{KA}}$	$I_{KA}=10mA$, $\Delta V_{KA}=V_{REF}$~16V		--	-0.5	-1.5	mV/V
Reference Input Current Fig2	I_{REF}	$I_{KA}=10mA$, R1=10KΩ, R2=∞		--	0.15	0.4	μA
Deviation of Reference Input Current Over Full Temperature Range Fig2	ΔI_{REF}	$I_{KA}=10mA$, R1=10KΩ, R2=∞, -20°C ≤T_A≤+85°C		--	--	0.4	μA
Minimum Cathode Current for Regulation Fig1	$I_{KA(MIN)}$	$V_{KA}=V_{REF}$		--	--	80	μA
Off-State Cathode Current Fig3	$I_{KA(OFF)}$	$V_{KA}=18V$, $V_{REF}=0$		--	0.04	0.5	μA
Dynamic Impedance	Z_{KA}	$V_{KA}=V_{REF}$, $I_{KA}=1$~ 100mA, f≤1.0KHz		--	0.05	0.15	Ω

Figure 1. Test Circuit for V_{KA} = V_{REF}

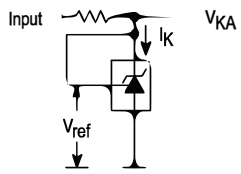


Figure 2. Test Circuit for V_{KA} > V_{REF}

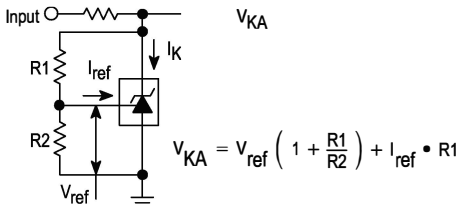
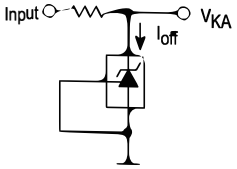
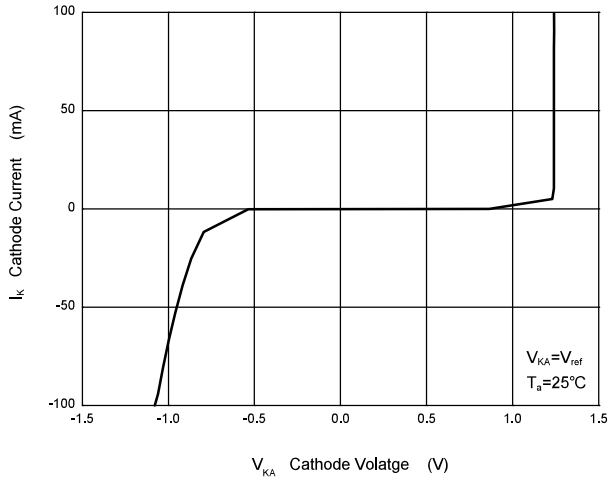
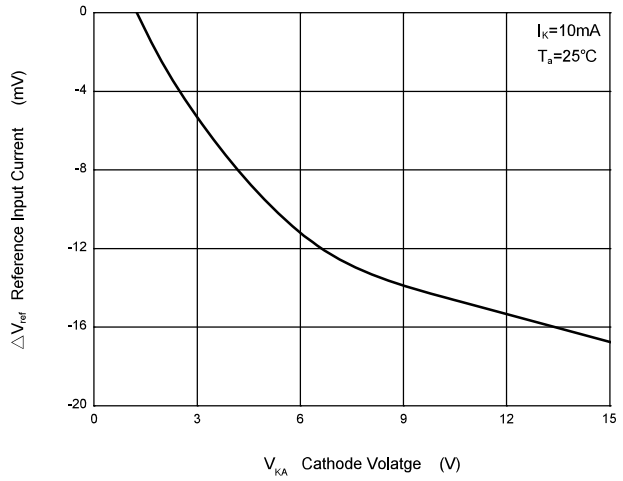


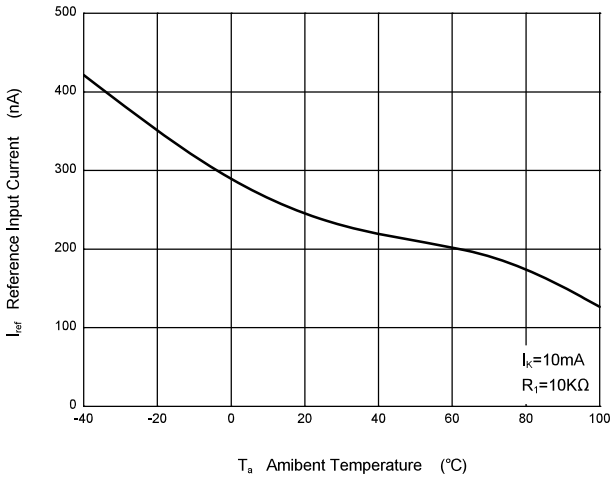
Figure 3. Test Circuit for I_{OFF}

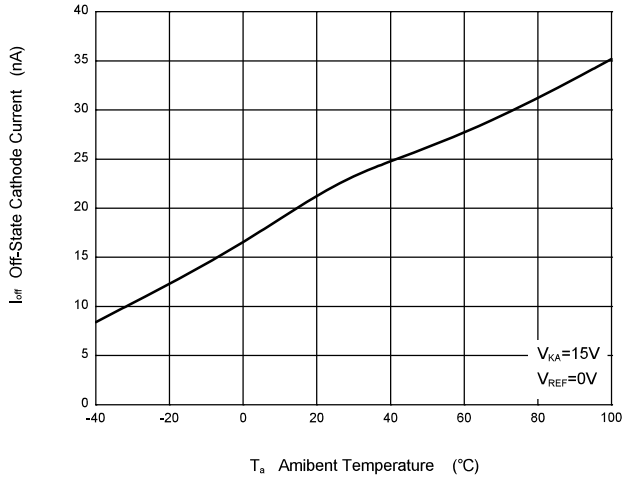


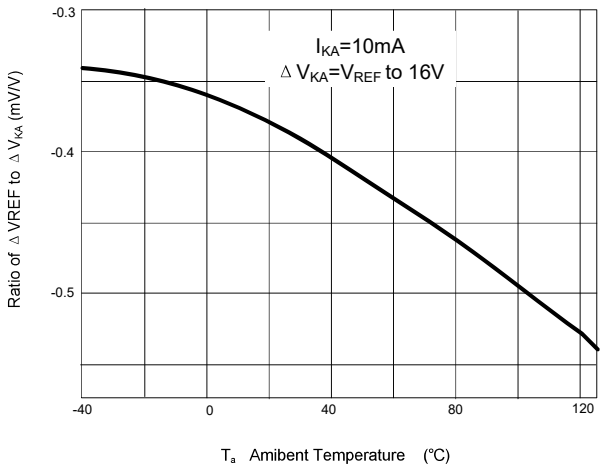
Typical Characteristic Curves

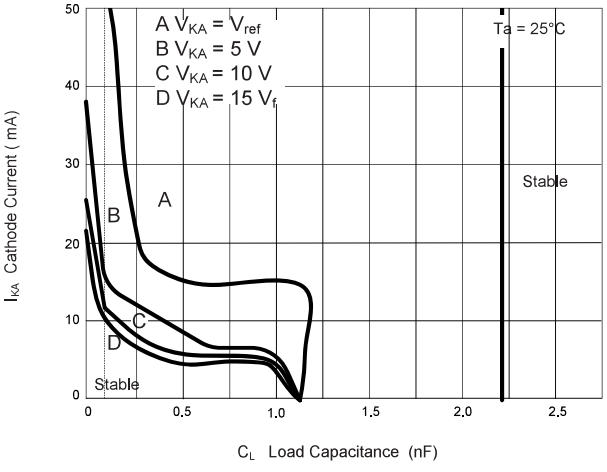












Ordering Information

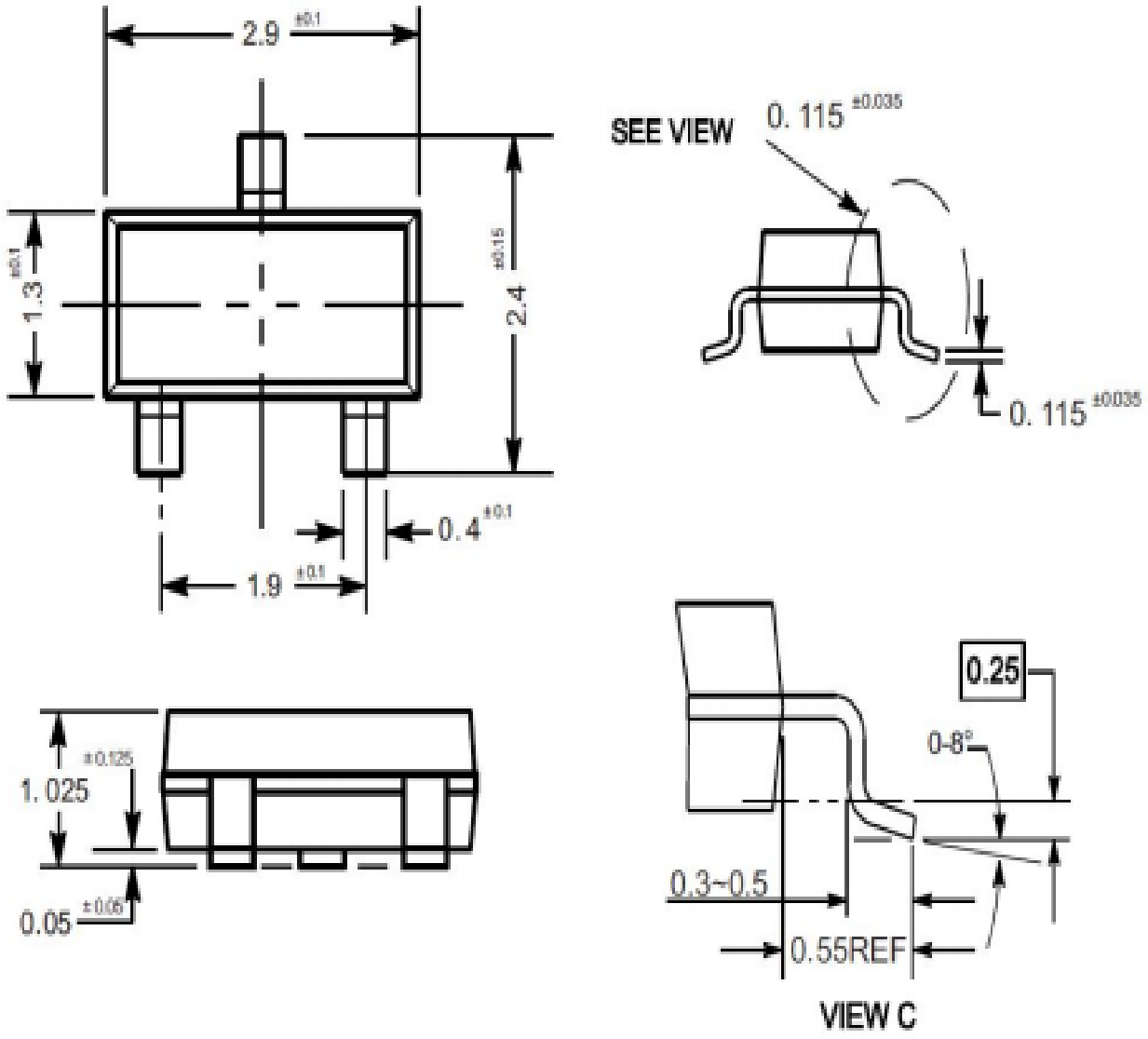
Ordering Number		Package	Packing	Quantity
Halogen Free	Lead Free			
ASPL432AZA-R		SOT23	Tape Reel	3000

PACKAGE	MARKING
SOT23	正面丝印

Package Outline

SOT23

Dimensions in mm



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