

Programmable Shunt Regulator

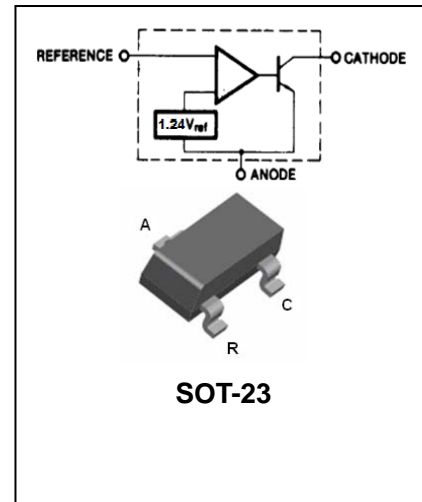
BL432

FEATURES

- Low dynamic output impedance 0.20 typical
- Sink current capability of 1.0 to 100mA
- Equivalent full-range temperature coefficient of 50ppm/°C typical
- Temperature compensated for operation over full rated Operating temperature range
- Low output noise voltage
- Fast turn-on response



Lead-free



ORDERING INFORMATION

Type No.	Marking	Package Code
BL432	432	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Parameter	symbol	limits	unit
Cathode Voltage	V_{KA}	15	V
Cathode current Range(Continuous)	I_{KA}	100	mA
Reference Input Current Range	I_{REF}	-0.05 to +3	mA
Power dissipation	P_D	330	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	350	°C/W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	155	°C/W
Operating Temperature Range	T_{OPR}	0 to 70	°C
Operating Junction Range	T_J	-40 to +150	°C
Storage temperature Range	T_{STG}	-65 to +150	°C

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Recommended Operating Conditions

Parameter	symbol	Min	Typ	Max	Unit
Cathode Voltage	V_{KA}	V_{REF}	-	15	V
Cathode Current	I_{KA}	1.0	-	100	mA

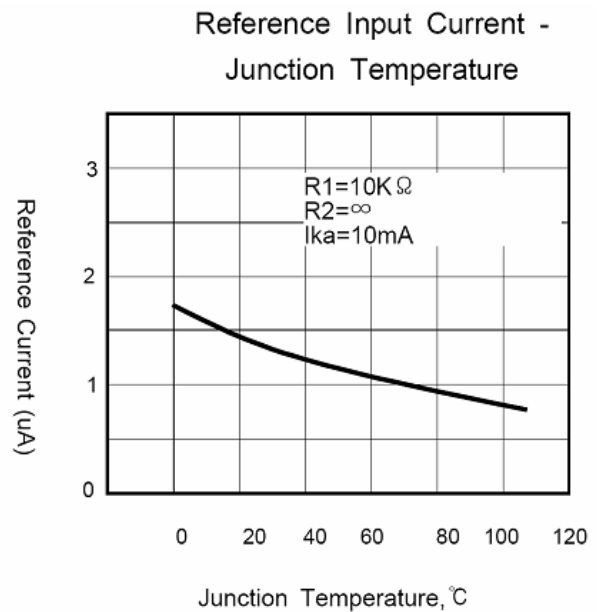
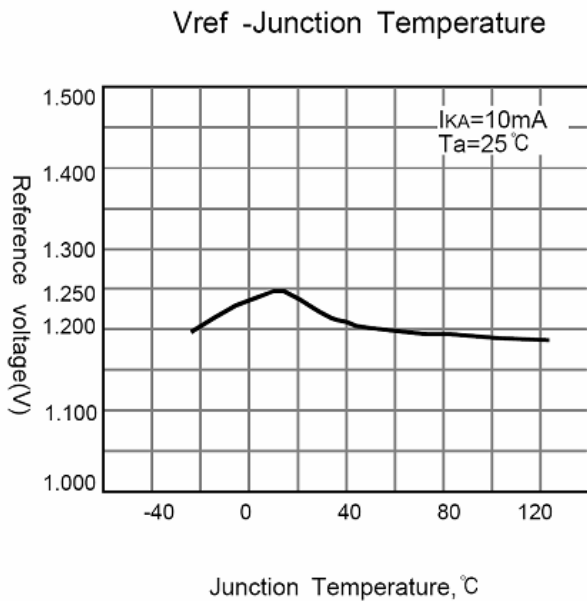
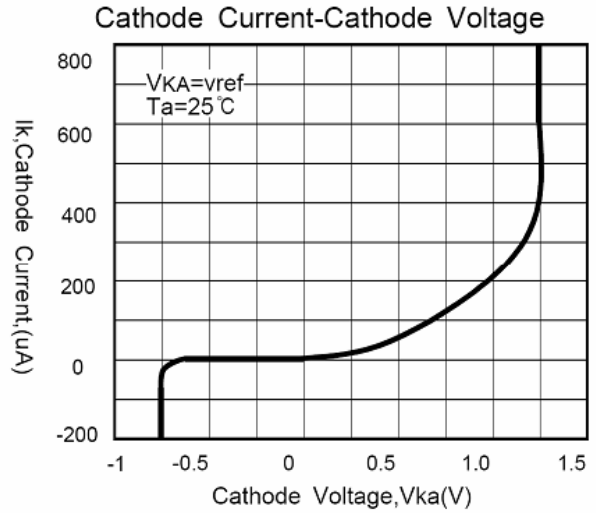
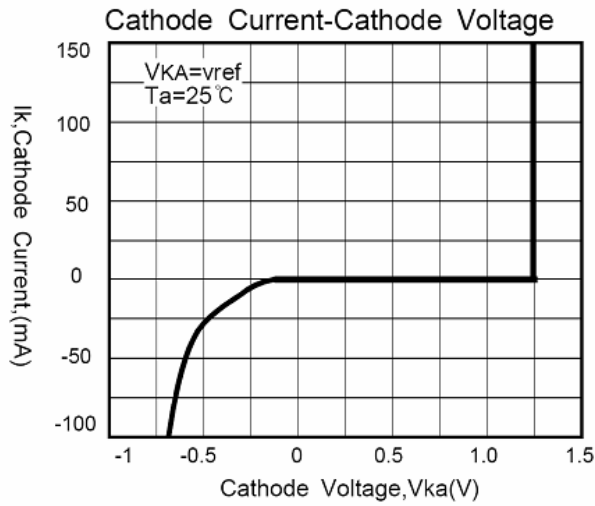
ELECTRICAL CHARACTERISTICS @ $T_a=25^{\circ}C$ unless otherwise specified

Parameter	symbol	conditions	Min.	Typ.	Max.	unit
Refer Input Voltage	V_{REF}	$V_{KA}=V_{REF}, I_{KA}=10mA$	0.5%	1.228	1.24	1.252
			1%	1.233		1.247
			2%	1.215		1.265
Deviation of Reference Input Voltage Over Full Temperature Range	$\frac{\Delta V_{REF}}{\Delta T}$	$V_{KA}=V_{REF}, I_{KA}=10mA$ TA=Full Range		10	25	mV
Ratio of Change in Reference Input Voltage to the Change in Cathode Voltage	$\frac{\Delta V_{REF}}{\Delta V_{KA}}$	$V_{KA}=1.25V$ to $14.5V$		1.0	2.7	mV/V
Reverse Input current	I_{REF}	$R_1=10K\Omega, R_2=\infty$		0.5	1	μA
Deviation of Reference Input Current Over Full Temperature Range	$\frac{\Delta I_{REF}}{\Delta T}$	$R_1=10K\Omega, R_2=\infty$ TA=Full Range		0.05	0.3	μA
Minimum Cathode Current for Regulation	$I_{KA(MIN)}$	$V_{KA}=V_{REF}$		60	80	μA
Off-Stage Cathode Current	$I_{KA(OFF)}$	$V_{KA}=15V, V_{REF}=0$		0.04	0.5	μA
Dynamic Impedance(Note2)	Z_{ZA}	$V_{KA}=V_{REF}, I_K=0.1mA \sim 20mA$ $f \leq 1.0kHz$		0.2	0.4	Ω

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TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



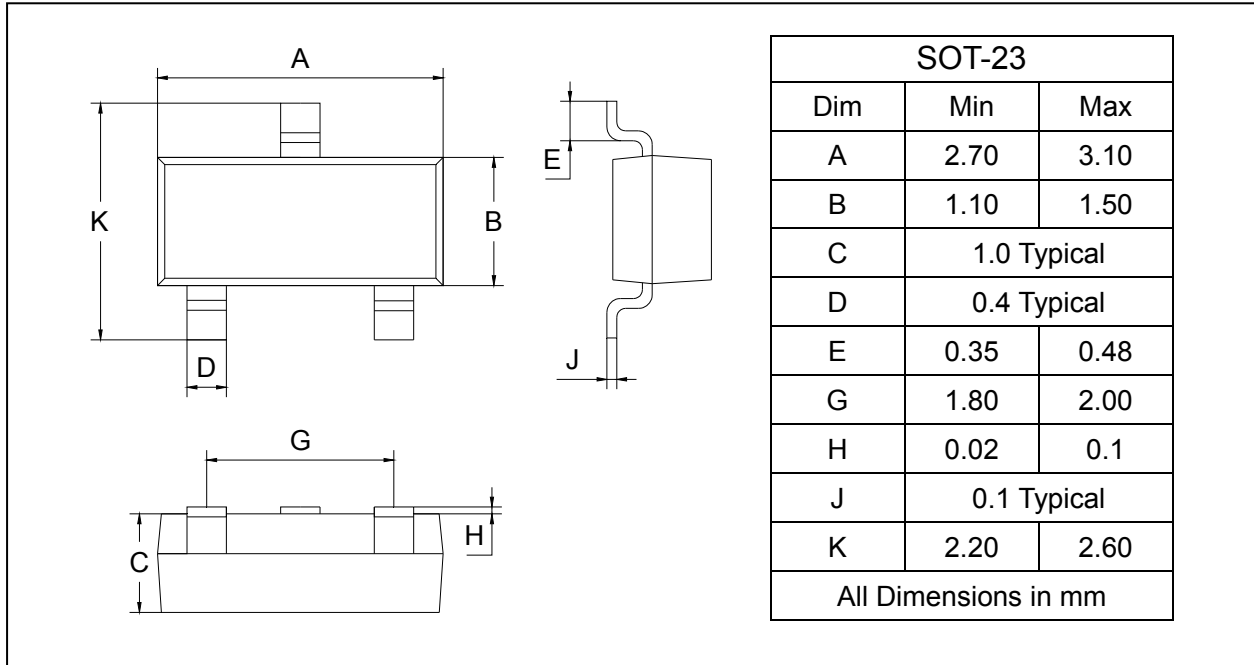
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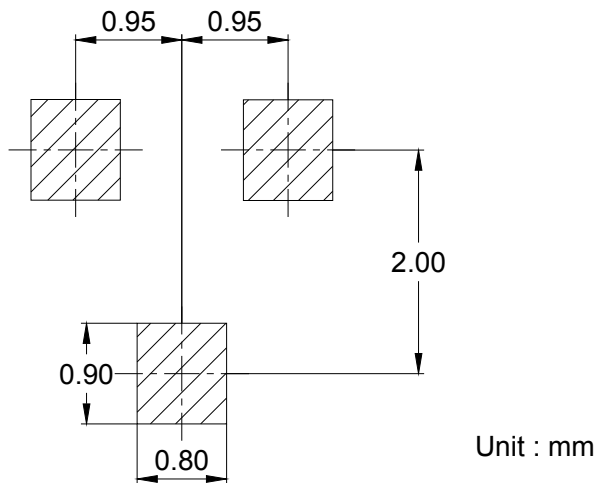
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
BL432	SOT-23	3000/Tape&Reel