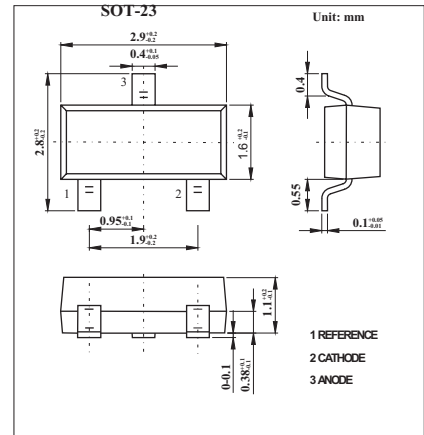


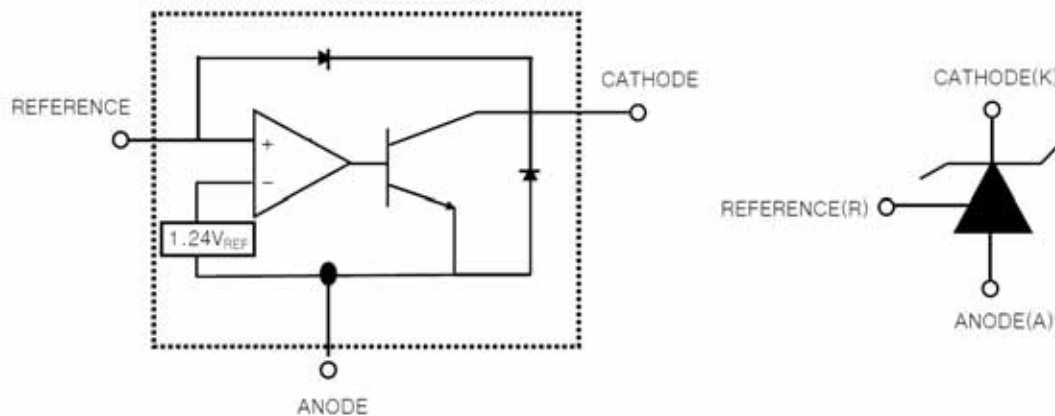


■ Features

- Low Voltage Operation : 1.24 V
- Programmable Out Voltage to 15V
- Sink Current Capability of 1 mA to 100 mA
- Equivalent Full-Range Temperature Coefficient of 50ppm/°C
- Temperature Compensated for Operation over Full Rated Operating Temperature Range
- Trimmed Bandgap to 5%
- Reference Input Voltage: $1.24 \pm 0.5\%$



■ Function Block Diagram



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Cathode Voltage	V _{KA}	15	V
Continuous Cathode Current Range	I _{KA}	100	mA
Reference Input Current Range	I _{REF}	-0.05 to 3	mA
Total Power Dissipation	P _D	370	mW
Junction Temperature	T _J	-40 to 150	°C
Operating Temperature	T _{OPR}	0 to 70	°C
Storage Temperature	T _{STG}	-65 to 150	°C



■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Reference Input Voltage	Vref	VKA=VREF, IKA=10mA	1.233	1.24	1.247	V
Deviation of reference Input Voltage Over Full Temperature Range	$\Delta V_{ref}/\Delta T$	VKA=VREF, IKA=10mA		10	25	mV
		TA=Full Range				
Ratio Of Change in Reference Input Voltage to the change in Cathode Voltage	$\Delta V_{ref}/\Delta V_{KA}$	VKA=1.25V to 14.5V		1.0	2.7	mV/V
Reference input Current	Iref	R1=10K Ω R2= ∞		0.5	1	μ A
Deviation Of Reference Input Current Over Full Temperature Range	$\Delta I_{ref}/\Delta T$	R1=10K Ω R2= ∞ TA=fullTemperature		0.05	0.3	μ A
Minimum cathode current for regulation	IKA(min)	VKA= VREF		60	80	μ A
Off-state cathode Current	IKA(OFF)	VKA=15V, VREF=0		0.04	0.5	μ A
Dynamic impedance	ZKA	VKA=VREF, IKA=0.1 to 20mA f \leq 1.0KHz		0.2	0.4	Ω

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

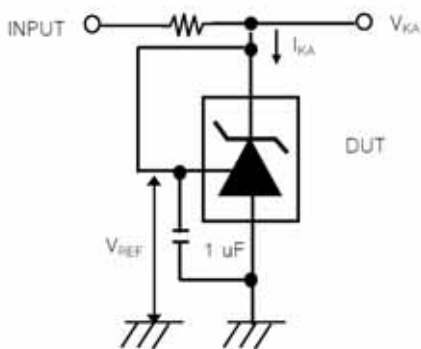


Fig. 2 Test Circuit for V_{KA} ≥ V_{REF}

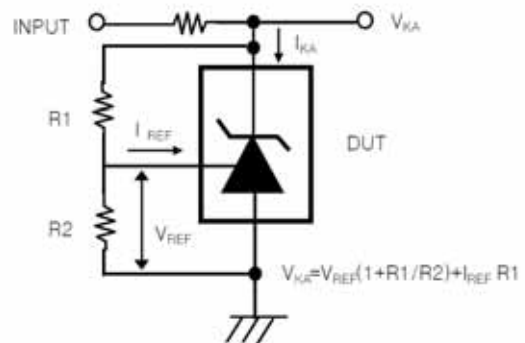
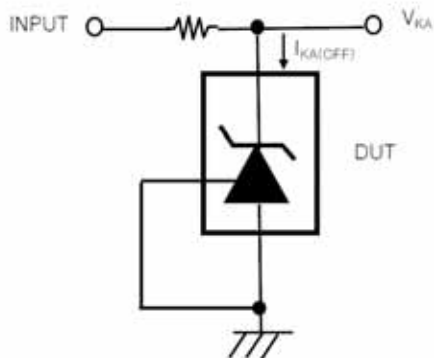
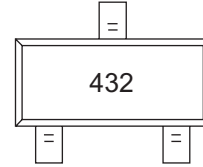


Fig. 3 Test Circuit for I_{KA} (off)

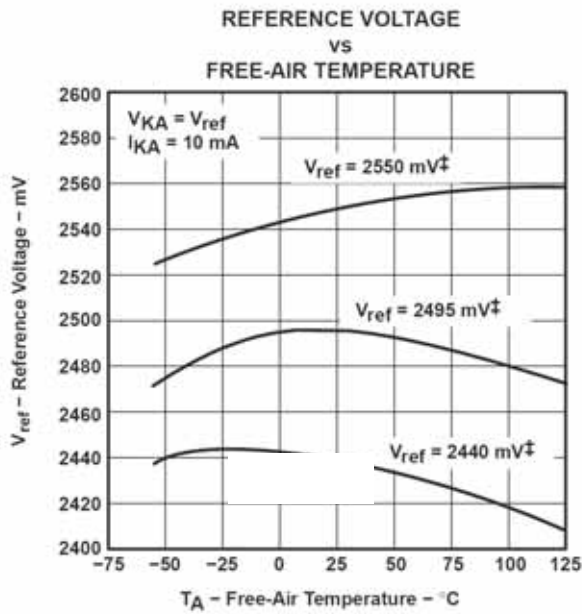




■ Marking Information



■ Typical Characteristics



† Data is for devices having the indicated value of V_{ref} at $I_{KA} = 10\text{ mA}$, $T_A = 25^\circ\text{C}$.

Figure 5

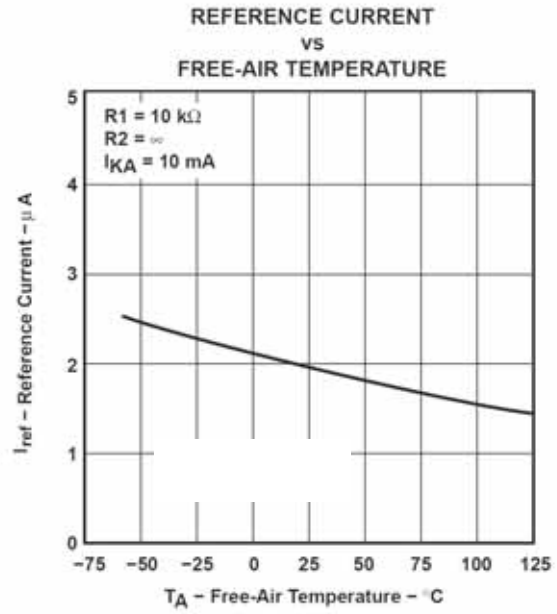


Figure 6

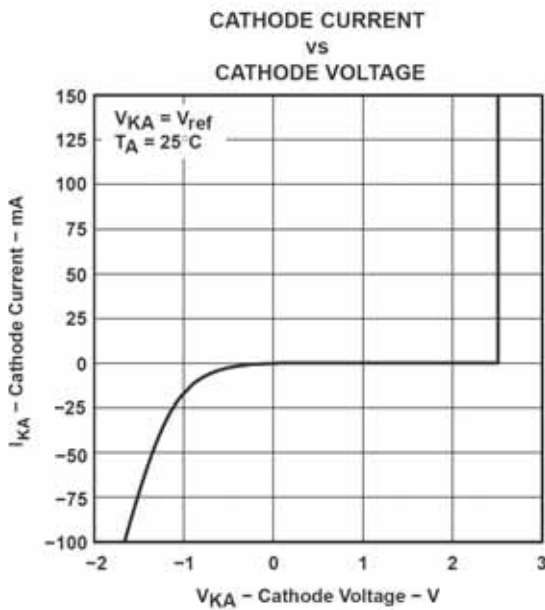


Figure 7

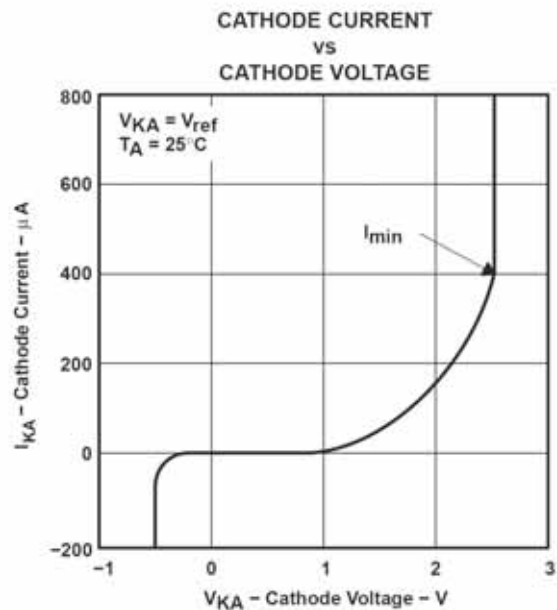
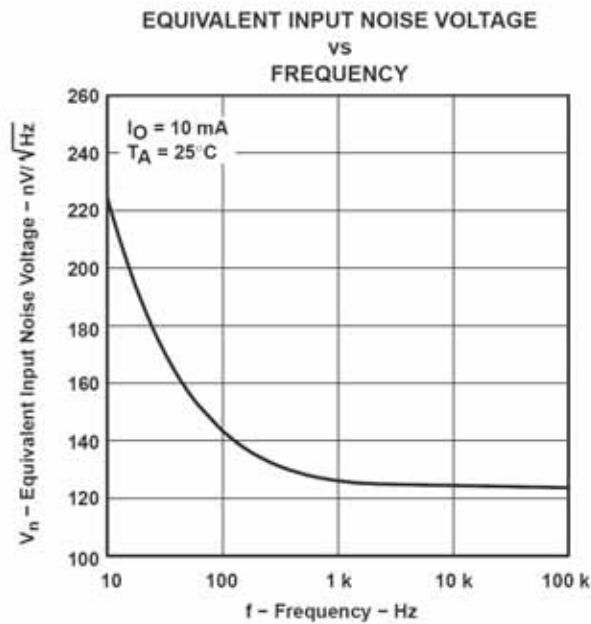
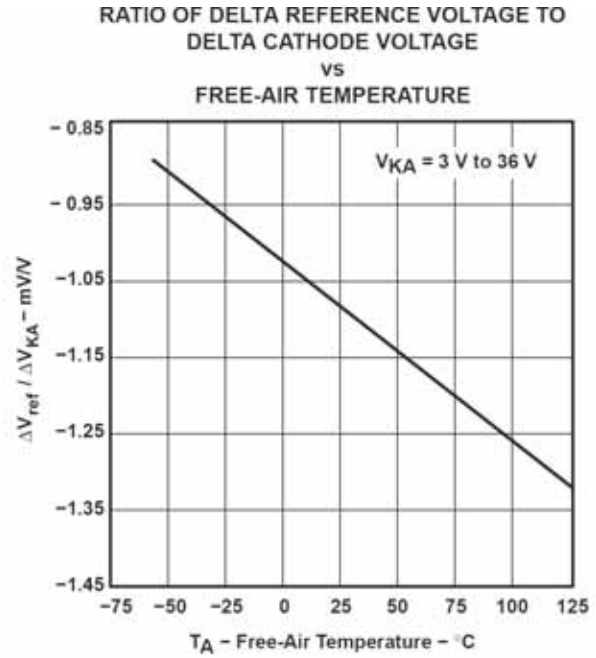
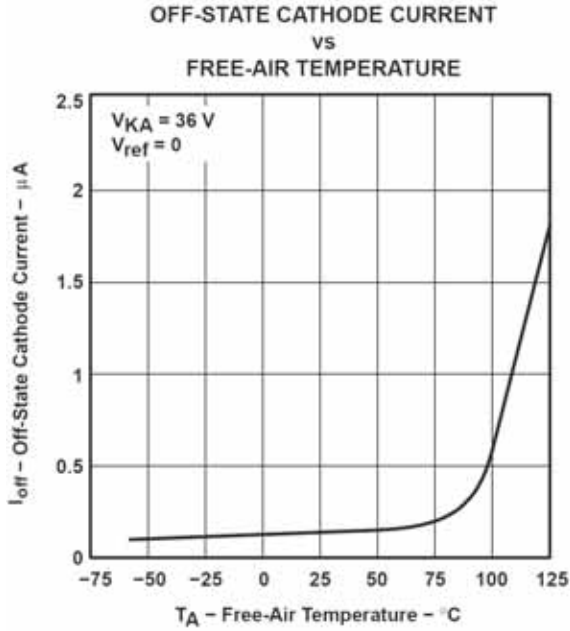


Figure 8

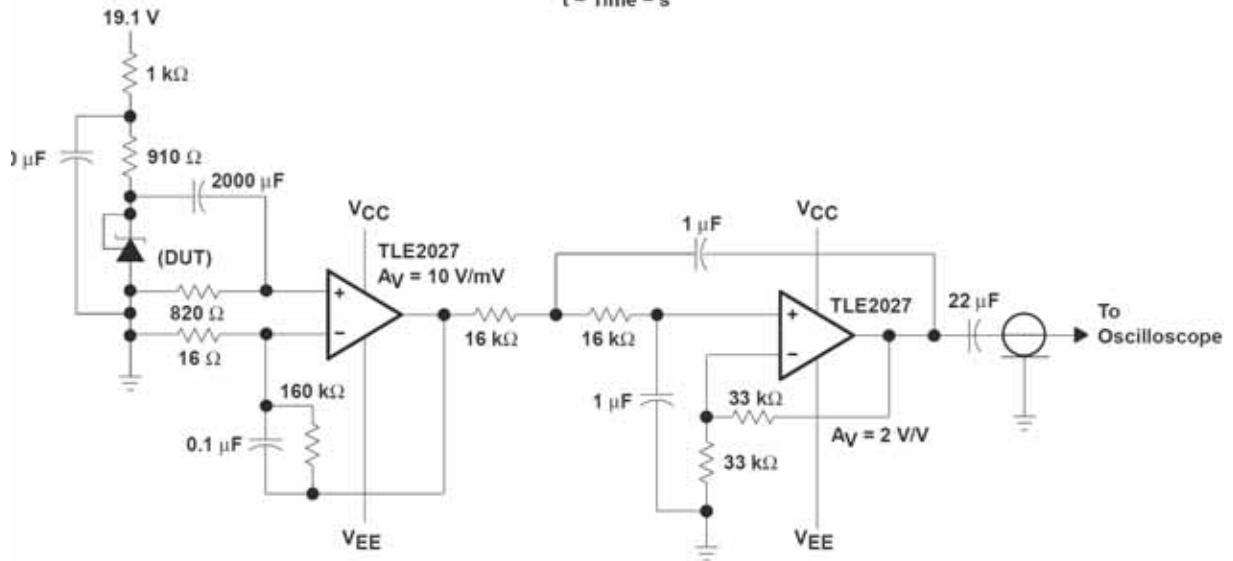
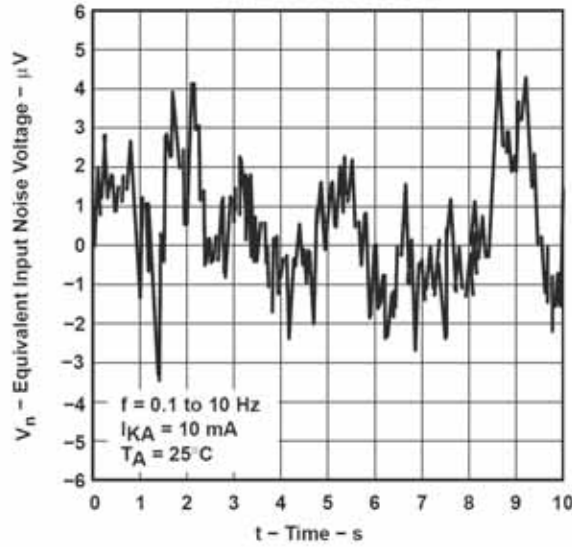
† Data at high and low temperatures is applicable only within the recommended operating free-air temperature ranges of the various devices.





TYPICAL CHARACTERISTICS

EQUIVALENT INPUT NOISE VOLTAGE
OVER A 10-S PERIOD



Test Circuit for Equivalent Input Noise Voltage



TYPICAL CHARACTERISTICS

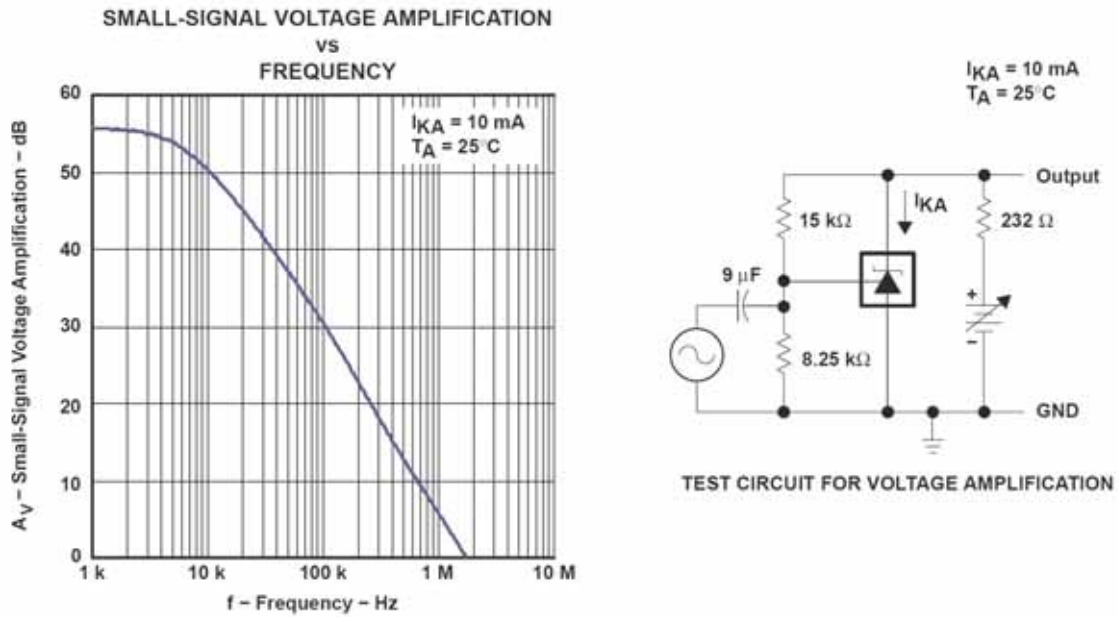


Figure 13

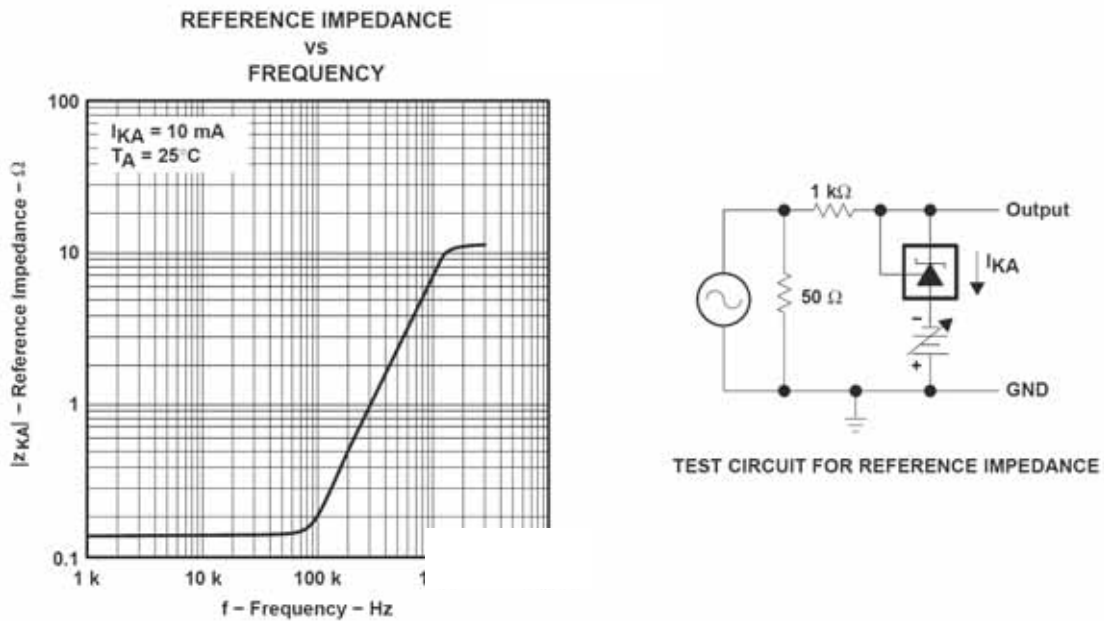
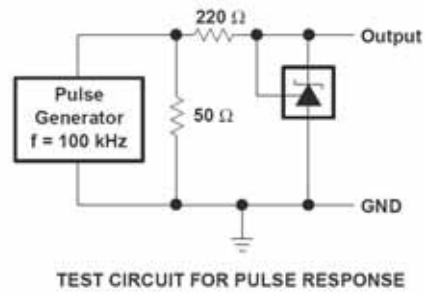
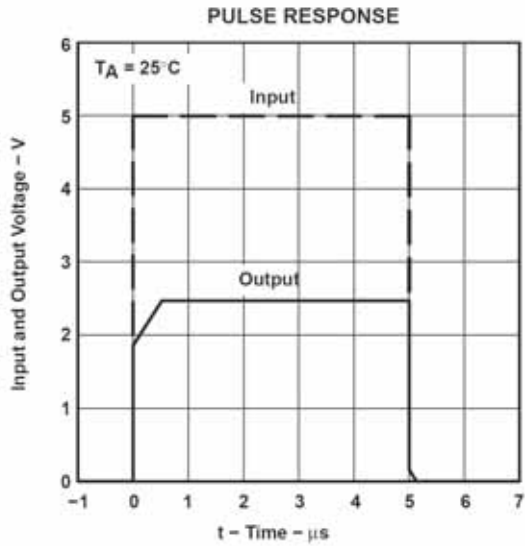


Figure 14



Ordering Information

Deiece	Packaging	Shipping
TL432	SOT23	3000/Tape & Reel