ALPHA
SEMICONDUCTOR
Excellence in Analog Power Products

AS255

Low Tempco Voltage Reference
2.50 Volts

FEATURES
- Low drift .....50ppm/°C
- Low dynamic impedance.....1.0 ΩTyp.
- Operating current..... 100µA to 5mA
- Low power..... 250µW @ Iin=100µA
- Two terminal "Zener" operation
- SOT - 23 surface mount package

APPLICATIONS
- A to D and D to A Converters
- Constant Current Source
- Digital Voltmeter
- Power Supply Monitor
- Precision Regulators

PRODUCT DESCRIPTION
The ALPHA Semiconductor's AS255 is a 2 terminal band-gap precision voltage reference which provides a stable fixed output voltage of 2.5 volts. ALPHA Semiconductor's design, process, and precise on chip trimming enable us to achieve low temperature coefficient as low as 25 ppm/°C and ±2% reference tolerance.

The AS255 is an excellent choice for applications which are looking for low input current between 100µA to 5mA, low drift over temperature, low noise, low power, and low cost. The AS255 is available in SOT-23 Surface Mount Package and Die at the operating temperature range of 0°C to 70°C.

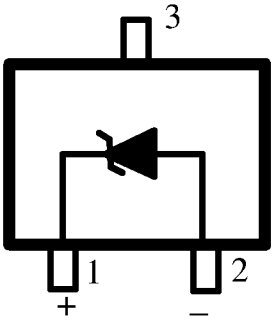
ORDERING INFORMATION

Part Number	MAX TEMPCO[1] ppm/°C	Package Type	Oper. Temp. Range
AS255A	50	SOT-23	COM.
AS255B	100	SOT-23	COM.

1. For lower Tempco, consult factory

PIN CONNECTIONS

SOT-23



Top View

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ABSOLUTE MAXIMUM RATINGS

Forward Current ..... 10 mA
Reverse Current ..... 10 mA
Max Power Dissipation ..... 125 mW
Operating Temperature ..... 0°C to 70°C
Storage Temperature Range ..... -65°C to +150°C
Lead Temperature Range ..... +260°C

ELECTRICAL CHARACTERISTICS at Iin = 1000µA, and Ta = +25°C, unless otherwise specified.

Parameters	Conditions	AS255A			AS255B			Units
		Min	Typ	Max	Min	Typ	Max	
Output Voltage		2.450	2.500	2.550	2.450	2.500	2.550	V
Output Impedance			0.6	2		0.6	2	Ω
Noise Voltage	0.1Hz≤f≤10Hz		15			15		µV p-p
Tempco	Note 1			50			100	ppm/°C
Turn-On Settling	0.1% of V out		30			30		µSec
Operating Current	Note 2	0.1		5	0.1		5	mA
Operating Temp. Range		0		+70	0		+70	°C

Note 1: Three-point measurement guarantees the error band over the specified temperature range.
Note 2: Optimum performance is obtained at currents below 1000µA.