

# Precision Core 0.25 mA Constant Current Source Reference

This small, embeddable constant current source reference gives low drift accuracy, protection, and filtering to ensure that the device under test (or D.U.T.) such as semiconductors, diodes, LEDs, sensor excitation, IC, and other loads can be characterized or calibrated with high accuracy. The 0.25 mA constant current source reference can have a variable equivalent load of up to 100 kilohms and a variable voltage input of 8 to 30 volts.

## Benefits of the CCS

- Low current drift (< 0.5%)
- 0.25 mA constant current
- Stable, repeatable current delivery
- 8-30 VDC input
- Short circuit protection
- Reverse voltage protection
- Overvoltage protection up to 60V
- ESD protection
- Small size
- Easy integration

The constant current source reference uses all voltage input dynamically (not a fixed voltage output). This is designed to deliver stable and reliable performance once it reaches thermal equilibrium, providing consistent output that engineers can depend on during extended operation. It restabilizes to consistent behavior even when the constant current source is moved by hand. The system exhibits natural self-correction, returning to its steady operating point after disturbances, reducing long-term drift and minimizing the need for

frequent recalibration. Its repeatable performance ensures that the same conditions produce the same results, which is critical for validation, testing, and quality assurance processes. Over several hours, the current output remains smooth and predictable, supporting applications that require continuous operation without instability or unexpected large variation. The constant current source gives low drift to (D.U.T.) such as semiconductors, diodes, LEDs, sensor excitation, IC and other loads.

## Material Property of the Printed Circuit Board

Property	Value
CTE in-plane (x,y)	11-14 ppm/°C
Moisture Absorption	0.06%
Surface Resistant	$4 \times 10^9 \text{ M}\Omega$
Volume Resistivity	$1.6 \times 10^8 \text{ M}\Omega \cdot \text{cm}$



To the best of our knowledge, the referenced product in this datasheet is RoHS compliant per the component manufacturers' documentation.

### Contacts

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