

Constant Impedance
New Product Announcement!

Voltage Variable Attenuator
HVA-451+

50Ω
250 to 450 MHz

The Big Deal

- Termination insensitive
 - Low Insertion Loss: 1.3 dB
 - Large attenuation range: 35 dB



CASE STYLE: CZ682

Pricing:
\$7.95 (QTY1-9)

Product Overview

The Mini-Circuits HVA series, surface mount, constant impedance voltage variable attenuators provide excellent attenuation and linearity performance while maintaining constant RF impedance across the attenuation range. Built using Mini-Circuits proven shielded module construction technology, these models integrate dual pin diodes along with internal 90 degree hybrids. This termination insensitive approach allows more flexibility so designers can locate the attenuators anywhere in their lineup, including cascading VVAs for true attenuation addition without VSWR interaction degrading the usable attenuation range.

Key Features

Feature	Advantages
Constant Impedance (Termination insensitive)	The HVA series VVA incorporates 90° hybrids to buffer internal circuits from source and load mismatch. This unique feature enables the HVA series to maintain performance independent of source and load impedance, and allows units to be cascaded with true additive attenuation.
Excellent flatness	Typical attenuation flatness less than 1 dB typ. across the full band from 0 to 30 dB attenuation is great for feed forward applications.
Monotonic Response	Monotonic response (0 to 2.5V) makes a great selection for ALC circuits
Return Loss	22 dB typ return loss across frequency and control voltage ranges provides an excellent match under all operating conditions allowing straightforward cascading.
High IP3	High +50 dBm IP3 typ. at min attenuation and +40 dBm typ. up to 2.5V allows flexibility to locate VVA in lineup where attenuation is required the most without degrading system linearity.