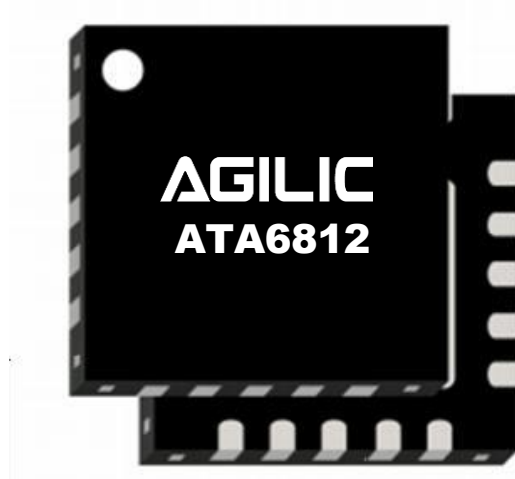


ATA6812

DC – 8.0 GHz 6-bit Digital Attenuator



20-pin 4×4 mm QFN Package

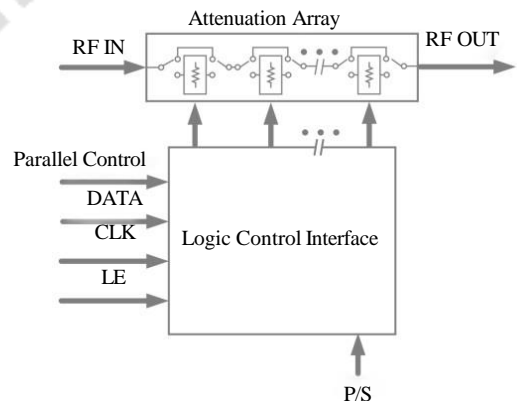
Product Overview

The ATA6812 is a low-cost, bidirectional 6-bit digital step attenuator (DSA) designed based on silicon technology, supporting a broad frequency range from 9 kHz to 8 GHz. It features broadband, high linearity, high precision, and fast switching capabilities. The device supports multiple attenuation state configurations, including serial, direct parallel, and latched parallel interfaces. With an input power 0.1dB compression point of up to 33 dBm, insertion loss of less than 2.0 dB within 6 GHz, and switching time under 260ns, it offers a maximum attenuation range of 31.75dB, with step options of 0.25dB, 0.5dB, and 1dB. Packaged in a compact QFN 4x4 surface-mount plastic form, it is pin-compatible with PE4312. The ATA6812 can be widely used in small cell base stations, distributed antenna systems, repeaters, test instruments, IoT, and point-to-point communications.

Key Features

- Frequency range: 9 kHz – 8 GHz
- Attenuation: 0.5 dB steps to 31.75 dB
- Insertion loss: 1.6dB @ 4 GHz
- Parallel and Serial programming interfaces
- IP0.1dB: >33 dBm
- IIP3: 58 dBm
- Attenuation error: $\pm(0.2 + 2.0\% \times \text{ATT})$ @4GHz
- ESD 2000V@HBM
- No overshoot during switching
- Small QFN (20-pin, 4 × 4 mm) package

Function Block Diagram



ATA6812 Block Diagram

Applications

- Small Cell / Wireless Infrastructure
- Distributed Antenna System (DAS)
- Repeater (RPT)
- Test instrument
- IoT