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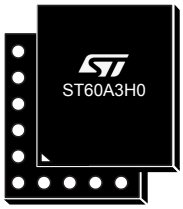
ST60A3H0

Data brief

60 GHz V-band contactless connectivity transceiver with eUSB2, UART, GPIO, or I²C tunneling



VFBGA30
(2.2 mm x 2.6 mm x 0.8 mm)

Product status link
ST60A3H0

Features

- 60 GHz V-Band transceiver for short range contactless connectivity up to 480 Mbit/s
- Compact solution integrating full RF transceiver operating in Half-Duplex mode
- 34 dB typical total link budget
- eUSB2, UART, GPIO, or I²C RF tunneling
- Single 1.8 V supply or dual supply 1.8 V (analog/RF) and 1.2 V (digital/GPIO)
- Low power consumption (typical values with single 1.8 V supply):
  - eUSB2 Rx/Tx - 110/130 mW
  - UART/GPIO/I²C - 90 mW
  - Standby - 23 µW
- 50 Ω single-ended nominal RF input/output impedance with recommended PCB transition
- Optimized BOM without external matching network and clock references. A reference clock may be used at one end of the RF link to comply with specific regional regulation
- Package: VFBGA 2.2 mm x 2.6 mm x 0.8 mm, 30 balls, 5x6 array, 0.4 mm pitch

Description

The ST60A3H0 is an RF millimeter-wave transceiver product operating in the 60 GHz V-band. The ST60A3H0 has a miniature form factor, optimized bill of materials, and low-power operation. The ST60A3H0 is a high-speed RF transceiver compliant with eUSB2, UART, and I²C protocols. The transceiver module contains general-purpose input/outputs (GPIOs) that are also available in tunneling mode. The device is compatible with various antenna configurations, either patch antennas designed on-PCB, or highly directive SMT horn antennas allowing both end-fire and broadside radiation patterns. The ST60A3H0 meets the requirements of applications by virtue of its compactness, low-power operation, ease of use, and its innovative architecture design for optimized system bill of materials.

Applications

- Contactless test factory automation and after sales services
- Life proof hole-less personal devices
- Contactless accessories
- Contactless personal equipment docking hub and data transfer
- Industrial contactless connectors
- Board-to-board connection and flex cable replacement

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Revision history

Table 1. **Document revision history**

Date	Revision	Changes
11-Dec-2023	1	Initial release.

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