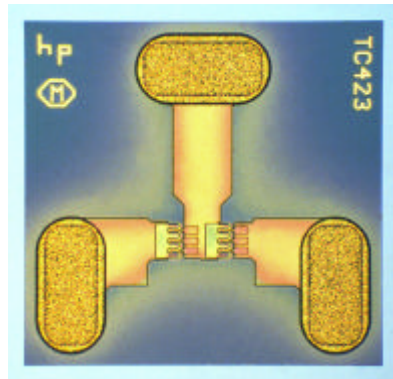




# Agilent HSCH-9501 GaAs Schottky Diode Series Pair Tee

Data Sheet



Chip Size:	620 × 595 μm (24.4 × 23.4 mils)
Chip Size Tolerance:	± 10 μm (± 0.4 mils)
Chip Thickness:	100 μm (4 mils)
Chip Thickness Tolerance:	± 15 μm (± 0.6 mils)
Bond Pad Sizes:	100 × 200 μm (3.9 × 7.9 mils)

## Description

The HSCH-9501 is an integrated series pair of GaAs Schottky barrier diodes in a Tee configuration. It is a beamless version of the HSCH-9201 series pair beam lead diode.

## Applications

The HSCH-9501 is a high-performance millimeter wave diode that can be used as a balanced mixer or frequency multiplier in microwave and millimeter wave transceivers.

## Specifications

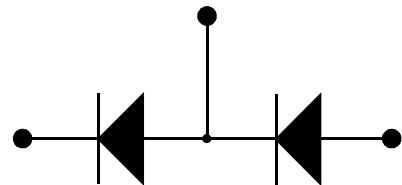
- $V_F$  (1 mA): 700-800 mV
- $V_F$  (10 mA): 800-850 mV
- $R_S$  (5 mA): <6 Ω
- BV (-10 mA): >4.5V
- $C_J$  (per diode): <0.050 pF

## Assembly Techniques

GaAs Schottky diodes are ESD sensitive. ESD preventive measures must be employed in all aspects of storage, handling, and assembly.

## Features

- Low Junction Capacitance  
– typically 40 fF
- Low Series Resistance  
– typically 3 Ω
- Large bond pads suitable for automated wire-bonding or flip-chip assembly
- Polyimide scratch protection



ESD precautions, handling considerations, die attach and bonding methods are critical factors in successful diode performance and reliability.

Agilent application note #54, "GaAs MMIC ESD, Die Attach and Bonding Guidelines" provides basic information on these subjects.

This data sheet contains a variety of typical and guaranteed performance data. The information supplied should not be interpreted as a complete list of circuit specifications. In this data sheet the term *typical* refers to the 50th percentile performance. For additional information contact your local Agilent Technologies sales representative.



Notes: