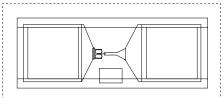


Agilent HSCH-9401 GaAs Schottky Diode

Data Sheet



Chip Size: $610 \times 255 \ \mu m \ (24 \times 10 \ mils)$ Chip Size Tolerance: $\pm 10 \, \mu m \, (\pm 0.4 \, mils)$ Chip Thickness: 100 μm (4 mils)

Chip Thickness Tol: ±15 µm (±0.6 mils)

Bond Pad Sizes: 175 x 175 μm (6.9 x 6.9 mils)

Description

The HSCH-9401 is a discrete Schottky barrier diode fabricated with the Schottky Barrier Integrated Diode (SBID) process.

Applications

The HSCH-9401 is a general purpose millimeter wave diode that can be used as a detector or as a mixer in applications such as digital radio, LMDS, or video distribution.

Assembly Techniques

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

Diode 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.

Additional References

PN #1, "HSCH-9401 Diode Model," and PN# 16, "HSCH-9401 **Detector Sensitivity Measure**ments."

Features

- f_c >800 GHz
- · Low junction capacitance - typically 35 fF
- · Low series resistance – typically 6Ω
- · High cut-off frequency
- · Polyimide scratch protection
- Durable construction
- · Large bond pads suitable for automated wire bonding or flipchip assembly

Specifications

V_f (1 mA): 630-800 mV

· V_f (10 mA): 730-980 mV

• R_S (5 mA): < 20Ω

• B_V (-10 µA): > 6 V

• I, (-2V): < 200 nA

• C₊: < 0.045 pF



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 sales representative.

www.agilent.com/semiconductors

For product information and a complete list of distributors, please go to our web site.

For technical assistance call:

Americas/Canada: +1 (800) 235-0312 or

(408) 654-8675

Europe: +49 (0) 6441 92460 China: 10800 650 0017 Hong Kong: (+65) 6271 2451

India, Australia, New Zealand: (+65) 6271 2394 Japan: (+81 3) 3335-8152(Domestic/International), or

0120-61-1280(Domestic Only) Korea: (+65) 6271 2194

Malaysia, Singapore: (+65) 6271 2054

Taiwan: (+65) 6271 2654

Data subject to change.
Copyright © 2002 Agilent Technologies, Inc.
Obsoletes 5968-4416E
April 4, 2002
5988-6154EN

