

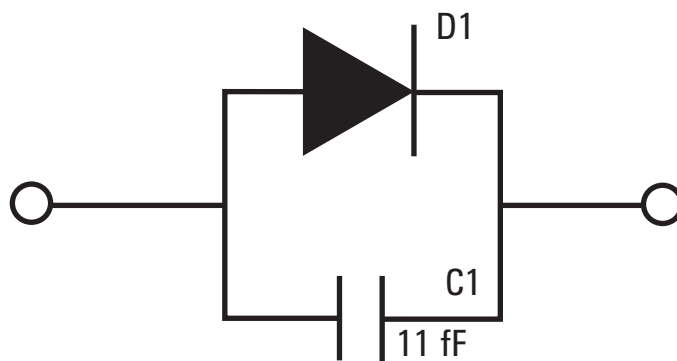
Keysight Technologies

TC421 Diode Model

Technical Overview

Description

This product note provides a Spice model and a Libra model of the TC421 discrete Schottky barrier GaAs diode. The 11 femto-farad parallel capacitor represents the parasitic capacitance of the bond pads.



Spice Model

```
VSOURCE 1 0
VMON 1 2 DC 0
D1 2 0 DMOD1
C1 2 0 .011P
TEMP 25 65
MODEL DMOD1 D IS = 500U
      RS=7 CJO=1F EG=1.42 N=1.2 PB=.65
      BV=8 IBV=1E -5
DCV VSOURCE -8 1 .1
PLOT DC I(VMON)
END
```

Libra DCTR Model

DIM

IND NH
CAP PF
FREQ GHZ
PWR DBM
CUR MA

CKT

```
RES_1 1 2 R=0.1 !current measuring element
DIODE_D1 2 0 [MODEL=DMOD1]
CAP_1 2 0 c=0.011
DEF1P 1 HPD
```

MODEL

```
DMOD1 D IS=5E-14 RS =7 CJO=17E-15
EG=1.42 N=1.2 VJ=0.65
```

SOURCE

```
HPD VS_D1 1 0 DC=1
```

DCTR

```
DCTR1 VS_D1
SWEEP -8 1 0.1
```

OUT

```
HPD I_HP9401 RES_1 GR1
```

GRID

```
DCTR1 -8 1 1
GR1 -10 25 5
```



myKeysight

www.keysight.com/find/mykeysight

A personalized view into the information most relevant to you.

www.keysight.com/quality

Keysight Technologies, Inc.

DEKRA Certified ISO 9001:2008

Quality Management System

Keysight Channel Partners

www.keysight.com/find/channelpartners

Get the best of both worlds: Keysight's measurement expertise and product breadth, combined with channel partner convenience.



www.keysight.com/find/mmic

This product note provides supplemental information not included in the product data sheet. The purpose of supplemental data is to provide the end user with useful product-specific information to aid in the design process. The information provided does not represent or imply additional product specifications. Every attempt has been made to provide accurate data on typical products.

This publication was previously known as Product Note #01.

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus

Americas

Canada	(877) 894 4414
Brazil	55 11 3351 7010
Mexico	001 800 254 2440
United States	(800) 829 4444

Asia Pacific

Australia	1 800 629 485
China	800 810 0189
Hong Kong	800 938 693
India	1 800 112 929
Japan	0120 (421) 345
Korea	080 769 0800
Malaysia	1 800 888 848
Singapore	1 800 375 8100
Taiwan	0800 047 866
Other AP Countries	(65) 6375 8100

Europe & Middle East

Austria	0800 001122
Belgium	0800 58580
Finland	0800 523252
France	0805 980333
Germany	0800 6270999
Ireland	1800 832700
Israel	1 809 343051
Italy	800 599100
Luxembourg	+32 800 58580
Netherlands	0800 0233200
Russia	8800 5009286
Spain	0800 000154
Sweden	0200 882255
Switzerland	0800 805353
	Opt. 1 (DE)
	Opt. 2 (FR)
	Opt. 3 (IT)
United Kingdom	0800 0260637

For other unlisted countries:
www.keysight.com/find/contactus
 (BP-07-10-14)

