# imall

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## S392D-G



Models Available

**Vishay Semiconductors** 

## **RF PIN Diodes - Dual Series**

3

2

 $\triangleright$ 

DESIGN SUPPORT TOOLS click logo to get started

#### **FEATURES**

- Wide frequency range 10 MHz to 1 GHz
- AEC-Q101 qualified
- Base P/N-HG3 green, automotive grade
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

#### **APPLICATIONS**

· Current controlled HF resistance in adjustable attenuators

#### **MECHANICAL DATA**

Case: SOT-23

Weight: approx. 8.1 mg

#### Packaging codes/options:

08/3K per 7" reel (8 mm tape), 15K/box

PARTS TABLE						
PART	ORDERING CODE	TYPE MARKING	CIRCUIT CONFIGURATION	REMARKS		
S392D-G	S392D-HG3-08	PH4	Dual serial	Tape and reel		

<b>ABSOLUTE MAXIMUM RATINGS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PART	TEST CONDITION	SYMBOL	VALUE	UNIT		
Reverse voltage		V <sub>R</sub>	30	V		
Forward continuous current		I <sub>F</sub>	50	mA		

<b>THERMAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT		
Thermal resistance junction to ambient air	on PC board 50 mm x 50 mm x 1.6 mm	R <sub>thJA</sub>	500	K/W		
Junction temperature		Tj	125	°C		
Storage temperature range		T <sub>stg</sub>	-55 to +150	°C		
Operating temperature range		T <sub>op</sub>	-55 to +125	°C		

<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I <sub>F</sub> = 20 mA		V <sub>F</sub>			1	V
Reverse current	V <sub>R</sub> = 30 V		I <sub>R</sub>			0.05	μA
Diode capacitance	$f = 100 \text{ MHz}, V_R = 0 \text{ V}$		CD			0.5	pF
Differential forward resistance	f = 100 MHz, I <sub>F</sub> = 1.5 mA		r <sub>f</sub>	40		60	Ω
Reverse impedance	f = 100 MHz, V <sub>R</sub> = 0 V	S392D-G	Zr	5			kΩ
Minority carrier lifetime	I <sub>F</sub> = 10 mA, I <sub>R</sub> = 10 mA		τ		4		μs

Rev. 1.3, 27-Apr-17 For technical questions within your region: DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com

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#### **Vishay Semiconductors**

#### TYPICAL CHARACTERISTICS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

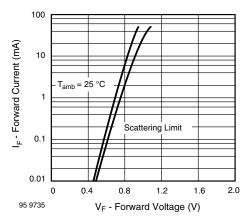


Fig. 1 - Forward Current vs. Forward Voltage

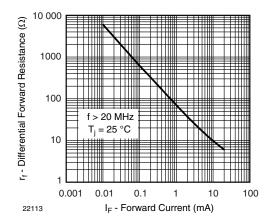


Fig. 2 - Differential Forward Resistance vs. Forward Current

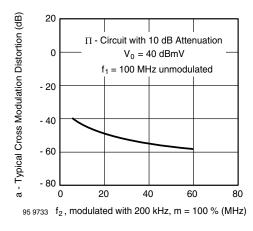


Fig. 3 - Typ. Cross Modulation Distortion vs. Frequency f<sub>2</sub>

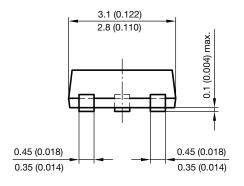
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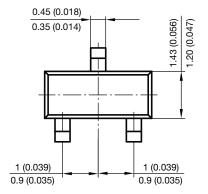
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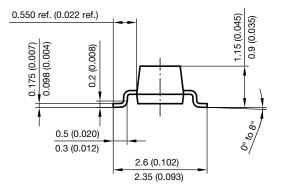


**Vishay Semiconductors** 

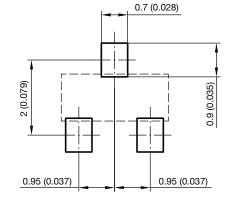
#### PACKAGE DIMENSIONS in millimeters (inches): SOT-23







Foot print recommendation:



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