

1N4448WS-7-F Datasheet



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DiGi Electronics Part Number	1N4448WS-7-F-DG
Manufacturer	Diodes Incorporated
Manufacturer Product Number	1N4448WS-7-F
Description	DIODE GEN PURP 75V 250MA SOD323
Detailed Description	Diode 75 V 250mA Surface Mount SOD-323

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Purchase and inquiry

Manufacturer Product Number:

1N4448WS-7-F

Series:

-

Technology:

Standard

Current - Average Rectified (Io):

250mA

Speed:

Fast Recovery =< 500ns, > 200mA (Io)

Current - Reverse Leakage @ Vr:

2.5 μ A @ 75 V

Mounting Type:

Surface Mount

Supplier Device Package:

SOD-323

Base Product Number:

1N4448

Manufacturer:

Diodes Incorporated

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

75 V

Voltage - Forward (Vf) (Max) @ If:

1.25 V @ 150 mA

Reverse Recovery Time (trr):

4 ns

Capacitance @ Vr, F:

4pF @ 0V, 1MHz

Package / Case:

SC-76, SOD-323

Operating Temperature - Junction:

-65°C ~ 150°C

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0070

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99



1N4448WS


SURFACE MOUNT FAST SWITCHING DIODE

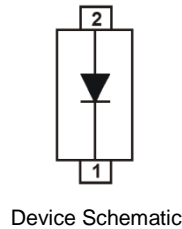
Features

- Fast Switching Speed
- Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **The DIODES™ 1N4448WSQ is suitable for automotive applications requiring specific change control; this part is AEC-Q101 qualified, PPAP capable, and manufactured in IATF 16949 certified facilities.**

<https://www.diodes.com/quality/product-definitions/>

Mechanical Data

- Package: SOD323
- Package Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Leads: Matte Tin Finish Annealed over Alloy 42 Leadframe (Lead-Free Plating). Solderable per MIL-STD-202, Method 208 
- Polarity: Cathode Band
- Weight: 0.004 grams (Approximate)

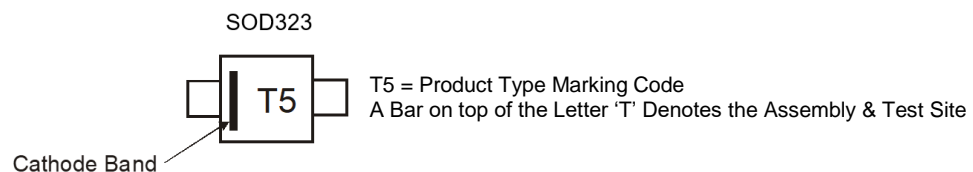


Ordering Information (Note 4)

Part Number	Package	Packing	
		Qty.	Carrier
1N4448WS-7-F	SOD323	3,000	Tape & Reel
1N4448WSQ-7-F	SOD323	3,000	Tape & Reel

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information





1N4448WS

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V _{RM}	100	V
Peak Repetitive Reverse Voltage	V _{RRM}	75	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
RMS Reverse Voltage	V _{R(RMS)}	53	V
Forward Continuous Current	I _{FM}	500	mA
Non-Repetitive Peak Forward Surge Current	I _{FSM}	@t = 1.0μs 4	A
		@t = 1.0s 0.5	

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 6)	P _D	200	mW
Thermal Resistance Junction to Ambient Air (Note 6)	R _{θJA}	625	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 5)	V _{(BR)R}	75	—	V	I _R = 2.5μA
Forward Voltage	V _{FM}	0.62	0.72	V	I _F = 5.0mA
		—	0.855		I _F = 10mA
		—	1.0		I _F = 100mA
		—	1.25		I _F = 150mA
Peak Reverse Current (Note 5)	I _{RM}	—	2.5	μA	V _R = 75V
			50	μA	V _R = 75V, T _J = +150°C
			30	μA	V _R = 25V, T _J = +150°C
			25	nA	V _R = 20V
Total Capacitance	C _T	—	4.0	pF	V _R = 0, f = 1.0MHz
Reverse Recovery Time	t _{RR}	—	4.0	ns	I _F = I _R = 10mA, I _{RR} = 0.1 x I _R , R _L = 100Ω

Notes: 5. Short duration pulse test used to minimize self-heating.
6. Part mounted on FR-4 PC board with minimum recommended pad layouts, which can be found on our website <http://www.diodes.com/package-outlines.html>.



1N4448WS

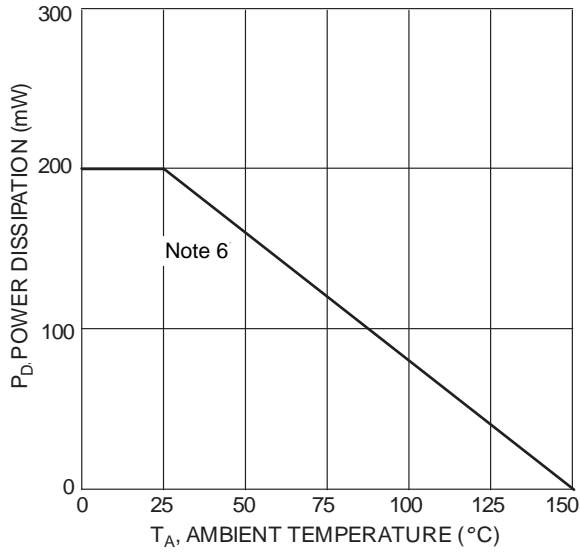


Figure 1 Forward Current Derating Curve

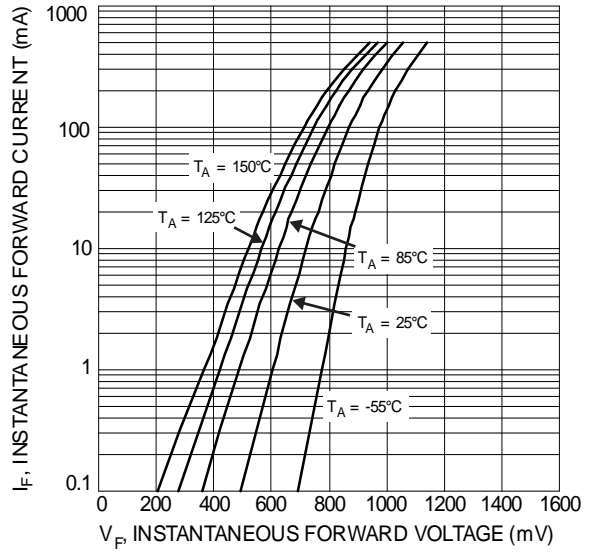


Figure 2 Typical Forward Characteristics

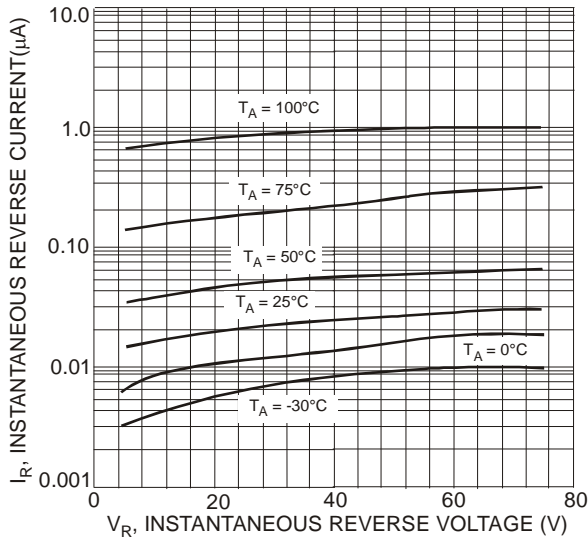


Figure 3 Typical Reverse Characteristics

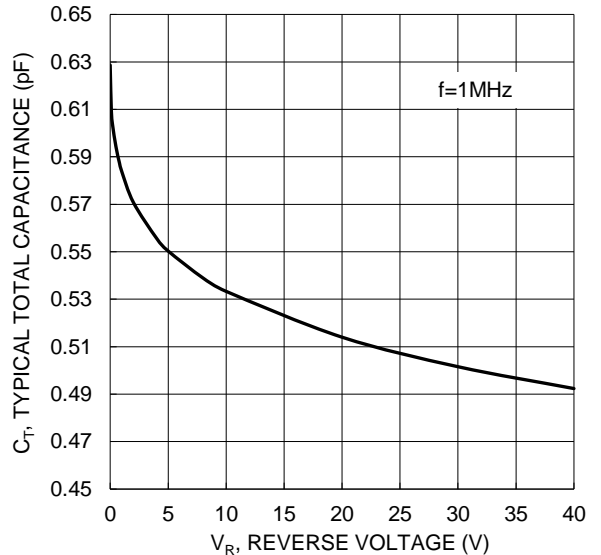
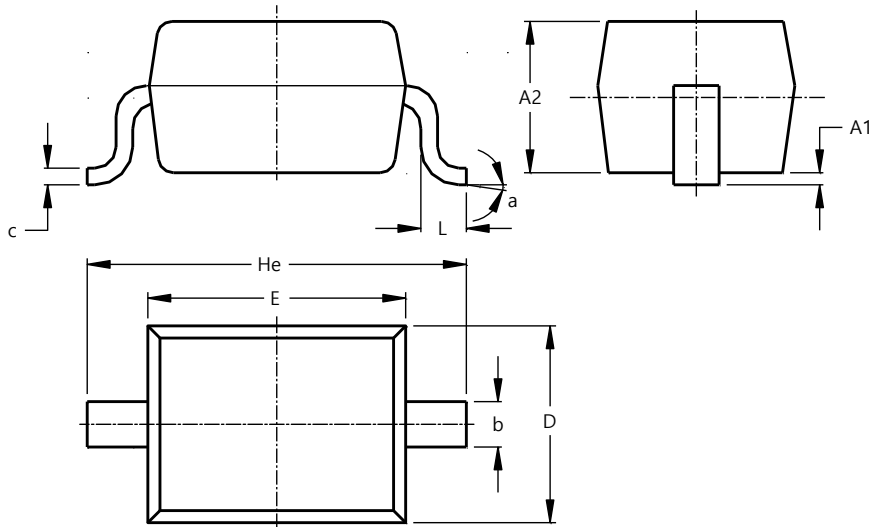


Figure 4 Typical Total Capacitance

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SOD323

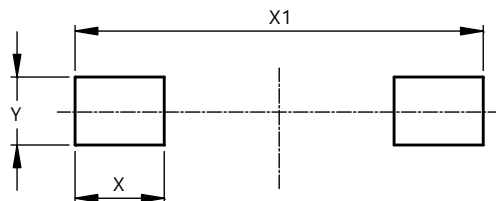


SOD323			
Dim	Min	Max	Typ
A1	--	0.10	0.05
A2	1.00	1.10	1.05
b	0.25	0.35	0.30
c	0.10	0.15	0.11
D	1.20	1.40	1.30
E	1.60	1.80	1.70
He	2.30	2.70	2.50
L	0.20	0.40	0.30
a	0°	8°	--
All Dimensions in mm			

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SOD323



Dimensions	Value (in mm)
X	0.590
X1	2.700
Y	0.450

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