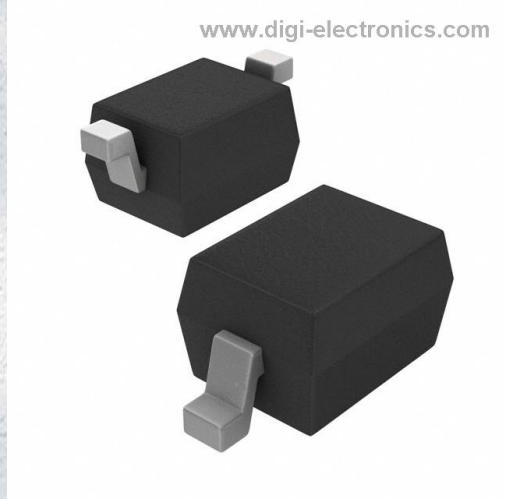
1N4148WS-HE3-18 Datasheet



https://www.DiGi-Electronics.com

DiGi Electronics Part Number	1N4148WS-HE3-18-DG
Manufacturer	Vishay General Semiconductor - Diodes Division
Manufacturer Product Number	1N4148WS-HE3-18
Description	DIODE GEN PURP 75V 150MA SOD323
Detailed Description	Diode 75 V 150mA Surface Mount SOD-323

This model 1N4148WS-HE3-18 is available at DiGi Electronics.

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Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
1N4148WS-HE3-18	Vishay General Semiconductor - Diodes Division
Series:	Product Status:
-	Active
Technology:	Voltage - DC Reverse (Vr) (Max):
Standard	75 V
Current - Average Rectified (Io):	Voltage - Forward (Vf) (Max) @ If:
150mA	1.2 V @ 100 mA
Speed:	Reverse Recovery Time (trr):
Small Signal =< 200mA (Io), Any Speed	4 ns
Current - Reverse Leakage @ Vr:	Capacitance @ Vr, F:
100 µA @ 100 V	-
Grade:	Qualification:
Automotive	AEC-Q101
Mounting Type:	Package / Case:
Surface Mount	SC-76, SOD-323
Supplier Device Package:	Operating Temperature - Junction:
SOD-323	-55°C ~ 150°C
Base Product Number:	
1N4148	

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	1 (Unlimited)
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8541.10.0070	

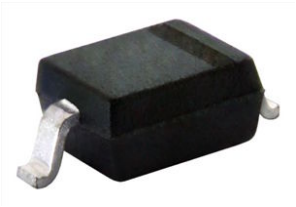
VISHAY

www.vishay.com

1N4148WS

Vishay Semiconductors

Small Signal Fast Switching Diode



FEATURES

- Silicon epitaxial planar diode
- Fast switching diodes
- AEC-Q101 qualified available
- Base P/N-E3 - RoHS-compliant, commercial grade
- Base P/N-HE3 - RoHS-compliant, AEC-Q101 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

e3

RoHS COMPLIANT

MARKING (example only)

22610

Bar = cathode marking
XY = type code

DESIGN SUPPORT TOOLS click logo to get started

3D Models Available

MECHANICAL DATA

Case: SOD-323

Weight: approx. 4.3 mg

Packaging codes / options:

18/10K per 13" reel (8 mm tape), 10K/box

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

PARTS TABLE

PART	ORDERING CODE	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS
1N4148WS	1N4148WS-E3-08 or 1N4148WS-E3-18	Single	A2	Tape and reel
	1N4148WS-HE3-08 or 1N4148WS-HE3-18			

ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage		V_R	75	V
Repetitive peak reverse voltage		V_{RRM}	100	
Average rectified current half wave rectification with resistive load (1)	f ≥ 50 Hz	$I_{F(AV)}$	150	mA
Surge forward current	t < 1 s and T_j = 25 °C	I_{FSM}	350	
Power dissipation (1)		P_{tot}	200	mW

Note

(1) Valid provided that electrodes are kept at ambient temperature.

THERMAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air (1)		R_{thJA}	650	K/W
Junction temperature		T_j	150	°C
Storage temperature range		T_{stg}	-65 to +150	°C
Operating temperature range		T_{op}	-55 to +150	°C

Note

(1) Valid provided that electrodes are kept at ambient temperature

ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)						
PARAMETER	**TEST CONDITION**	**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Forward voltage	I_F = 10 mA	V_F			1	V
	I_F = 100 mA	V_F			1.2	V
Leakage current	V_R = 20 V	I_R			25	nA
	V_R = 75 V	I_R			5	µA
	V_R = 100 V	I_R			100	
	V_R = 20 V, T_j = 150 °C	I_R			50	
Diode capacitance	V_F = V_R = 0 V	C_D			4	pF
Voltage rise when switching ON	Tested with 50 mA pulses, t_p = 0.1 µs, rise time < 30 ns, f_p = (5 to 100) kHz	V_{fr}			2.5	V
Reverse recovery time	I_F = 10 mA, i_R = 1 mA, V_R = 6 V, R_L = 100 Ω	t_{rr}			4	ns

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

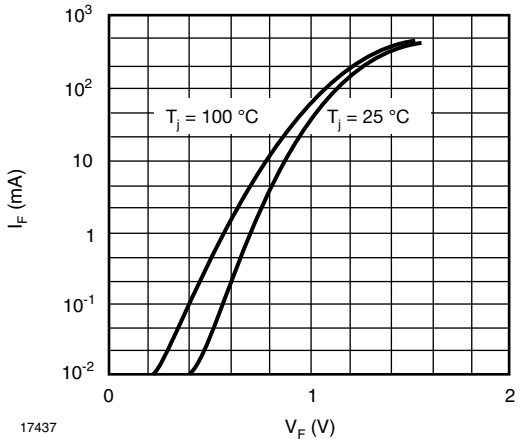


Fig. 1 - Forward Characteristics

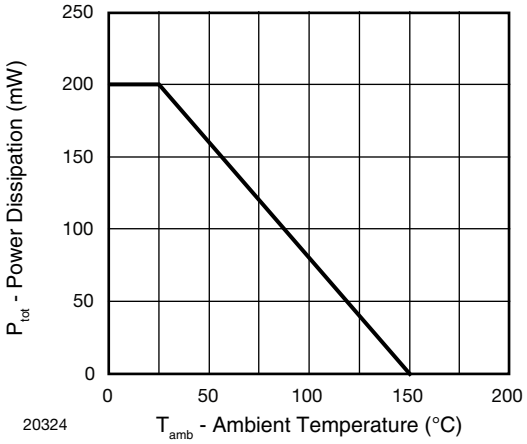


Fig. 3 - Admissible Power Dissipation vs. Ambient Temperature

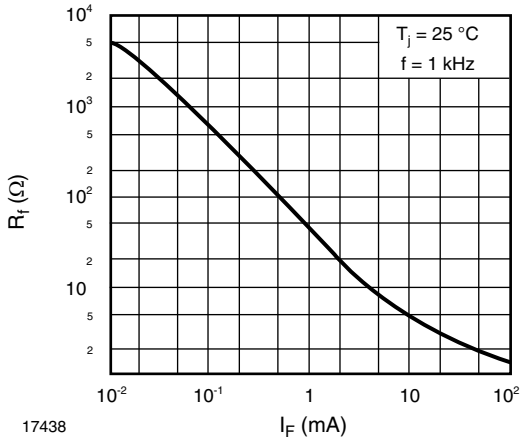


Fig. 2 - Dynamic Forward Resistance vs. Forward Current

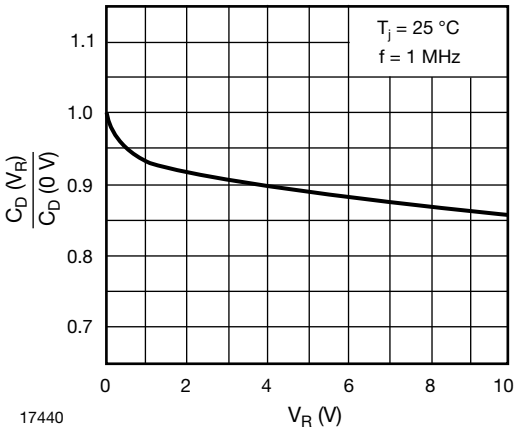


Fig. 4 - Relative Capacitance vs. Reverse Voltage

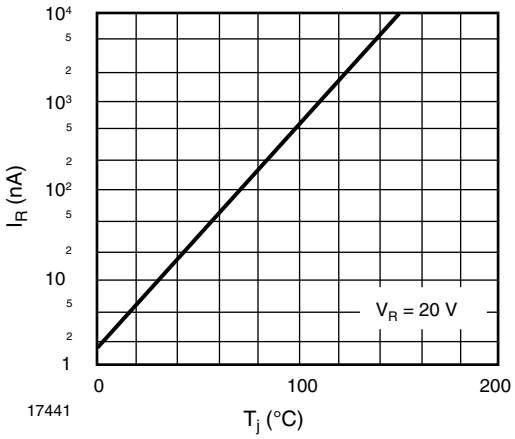


Fig. 5 - Leakage Current vs. Junction Temperature

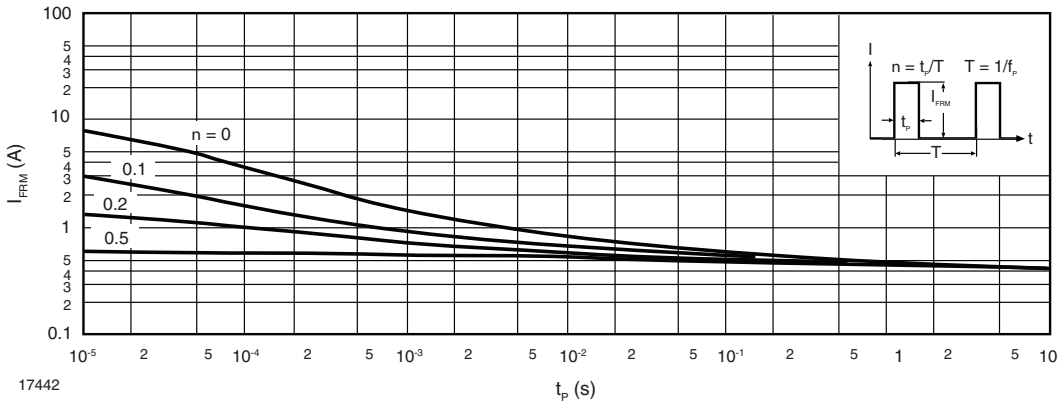
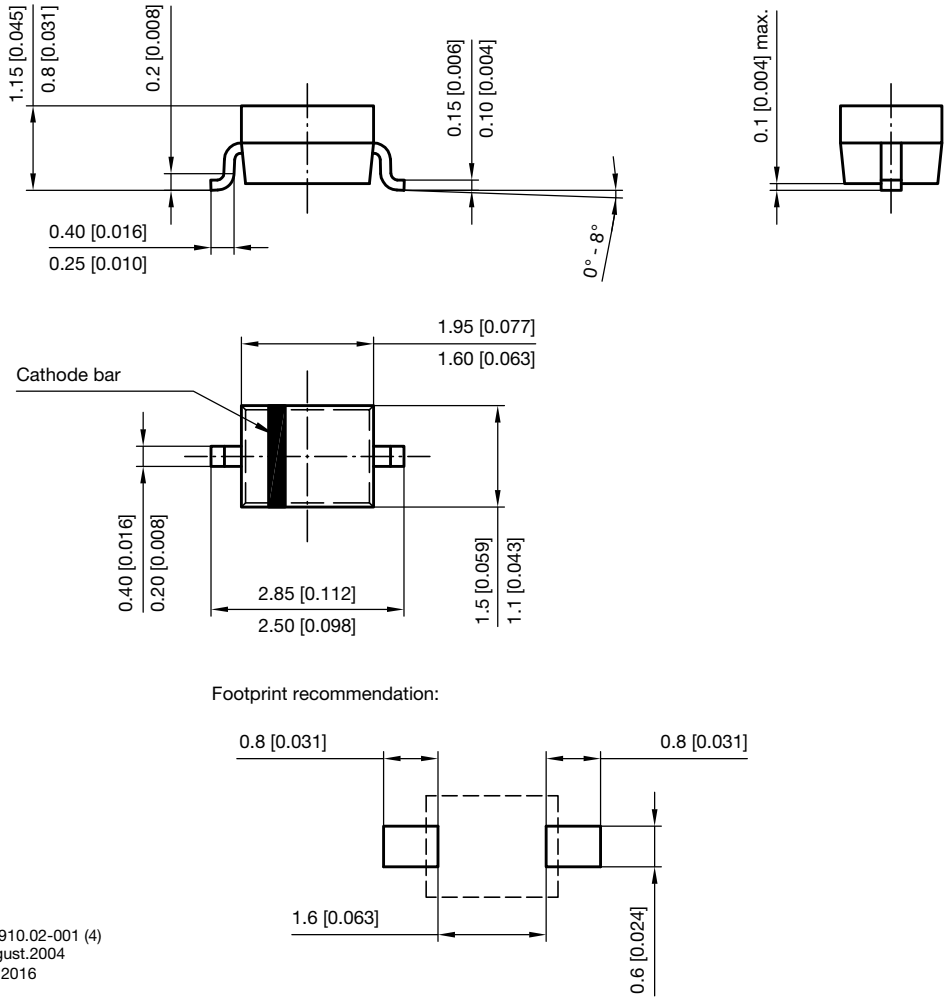


Fig. 6 - Admissible Repetitive Peak Forward Current vs. Pulse Duration

PACKAGE DIMENSIONS in millimeters (inches): **SOD-323**



Footprint recommendation:

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17443

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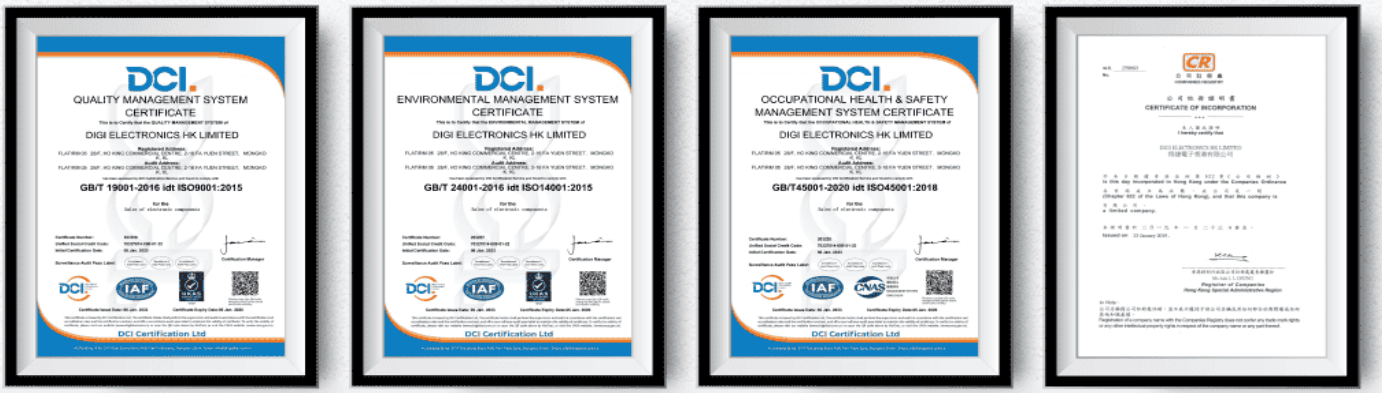

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