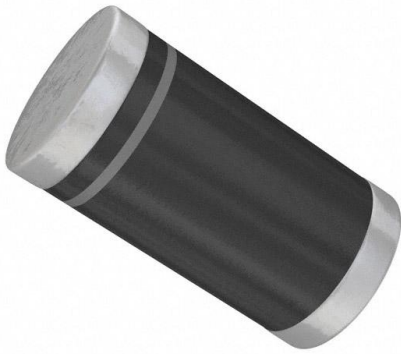


1N6478-E3/96 Datasheet

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DiGi Electronics Part Number	1N6478-E3/96-DG
Manufacturer	Vishay General Semiconductor - Diodes Division
Manufacturer Product Number	1N6478-E3/96
Description	DIODE GEN PURP 50V 1A DO213AB
Detailed Description	Diode 50 V 1A Surface Mount DO-213AB

This model 1N6478-E3/96 is available at DiGi Electronics.

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Purchase and inquiry

Manufacturer Product Number:

1N6478-E3/96

Series:

SUPERECTIFIER®

Technology:

Standard

Current - Average Rectified (Io):

1A

Speed:

Standard Recovery >500ns, > 200mA (Io)

Capacitance @ Vr, F:

8pF @ 4V, 1MHz

Package / Case:

DO-213AB, MELF (Glass)

Operating Temperature - Junction:

-65°C ~ 175°C

Manufacturer:

Vishay General Semiconductor - Diodes Division

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

50 V

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

1.1 V @ 1 A

Current - Reverse Leakage @ Vr:

10 µA @ 50 V

Mounting Type:

Surface Mount

Supplier Device Package:

DO-213AB

Base Product Number:

1N6478

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0080

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

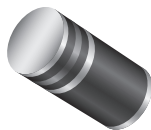
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Vishay General Semiconductor

Surface-Mount Glass Passivated Junction Rectifier

Superectifier®


GL41 (DO-213AB)

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	1.0 A
V_{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V
I_{FSM}	30 A
I_R	10 μ A
V_F	1.1 V
T_J max.	175 °C
Package	GL41 (DO-213AB)
Circuit configuration	Single

FEATURES

- Superectifier structure for high reliability condition
- Ideal for automated placement
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 250 °C
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

TYPICAL APPLICATIONS

For use in general purpose rectification of power supplies, inverters, converters and freewheeling diodes for consumer, automotive and telecommunication.

MECHANICAL DATA

Case: GL41 (DO-213AB), molded epoxy over glass body
Molding compound meets UL 94 V-0 flammability rating
Base P/N-E3 - RoHS-compliant, commercial grade

Terminals: matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test

Polarity: two bands indicate cathode end - 1st band denotes device type and 2nd band denotes repetitive peak reverse voltage rating

MAXIMUM RATINGS ($T_A = 25$ °C unless otherwise noted)									
PARAMETER	SYMBOL	1N6478	1N6479	1N6480	1N6481	1N6482	1N6483	1N6484	UNIT
STANDARD RECOVERY DEVICE: 1ST BAND IS WHITE									
Polarity color bands (2 nd band)		Gray	Red	Orange	Yellow	Green	Blue	Violet	
Max. repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Max. RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Max. DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Max. average forward rectified current	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	30							A
Max. full load reverse current, full cycle average at $T_A = 75$ °C	$I_{R(AV)}$	100							μ A
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175							°C



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ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	1N6478	1N6479	1N6480	1N6481	1N6482	1N6483	1N6484	UNIT
Max. instantaneous forward voltage	1.0 A	$T_A = 25\text{ }^\circ\text{C}$	1.1						V	
		$T_A = 75\text{ }^\circ\text{C}$	1.0							
Max. DC reverse current at rated DC blocking voltage		$T_A = 25\text{ }^\circ\text{C}$	10						μA	
		$T_A = 125\text{ }^\circ\text{C}$	200							
Typical junction capacitance	4.0 V, 1 MHz	C_J	8.0						pF	

THERMAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)										
PARAMETER	SYMBOL	1N6478	1N6479	1N6480	1N6481	1N6482	1N6483	1N6484	UNIT	
Max. thermal resistance	$R_{\theta JA}^{(1)}$	50						$^\circ\text{C/W}$		
	$R_{\theta JT}^{(2)}$	20								

Notes

- (1) Thermal resistance from junction to ambient, 0.24" x 0.24" (6.0 mm x 6.0 mm) copper pads to each terminal
 (2) Thermal resistance from junction to terminal, 0.24" x 0.24" (6.0 mm x 6.0 mm) copper pads to each terminal

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
1N6482-E3/96	0.114	96	1500	7" diameter plastic tape and reel
1N6482-E3/97	0.114	97	5000	13" diameter plastic tape and reel



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RATINGS AND CHARACTERISTICS CURVES ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

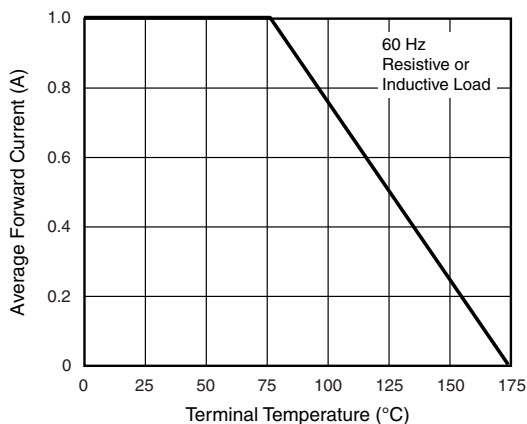


Fig. 1 - Forward Current Derating Curve

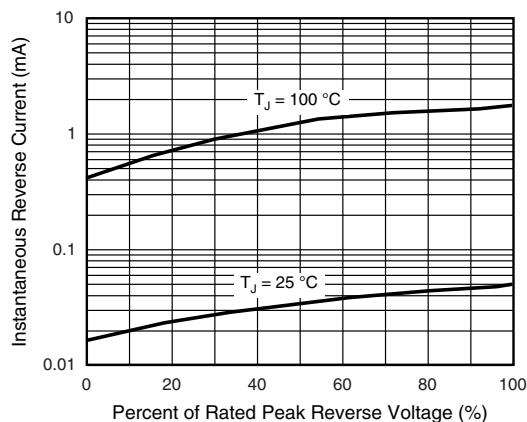


Fig. 4 - Typical Reverse Characteristics

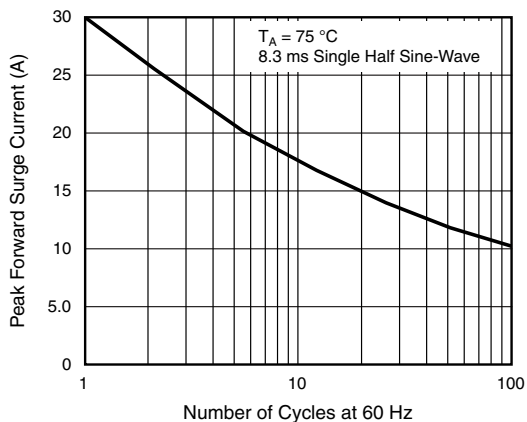


Fig. 2 - Max. Non-Repetitive Peak Forward Surge Current

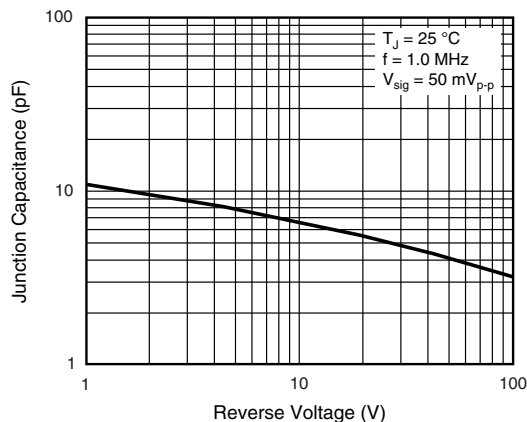


Fig. 5 - Typical Junction Capacitance

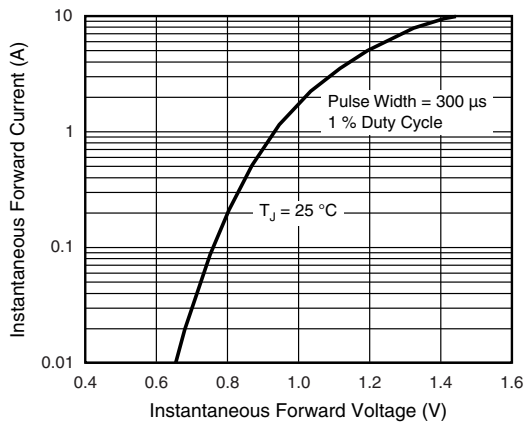


Fig. 3 - Typical Instantaneous Forward Characteristics

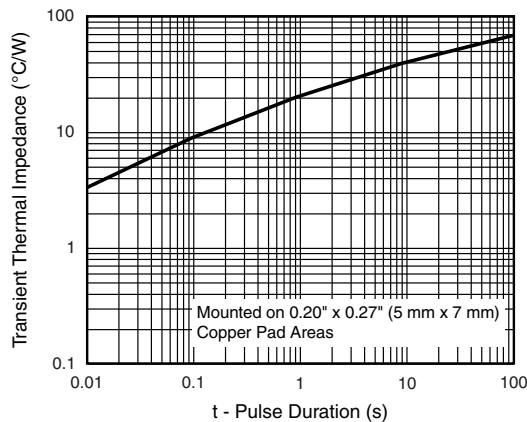


Fig. 6 - Typical Transient Thermal Impedance

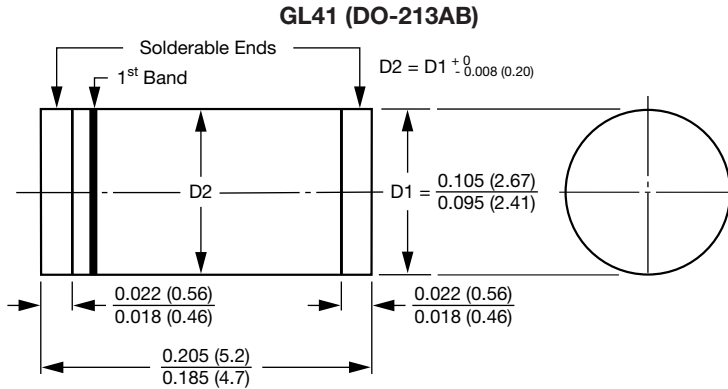


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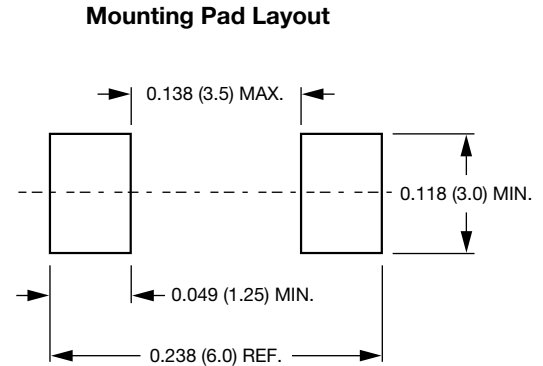
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PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



1st band denotes type and positive end (cathode)





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