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Vishay General Semiconductor

### **Surface-Mount Glass Passivated Junction Rectifier**

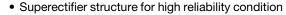
### Superectifier®



GL41 (DO-213AB)

PRIMARY CHARACTERISTICS							
I <sub>F(AV)</sub>	1.0 A						
V <sub>RRM</sub>	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V						
I <sub>FSM</sub>	30 A						
I <sub>R</sub>	10 μΑ						
V <sub>F</sub>	1.1 V						
T <sub>J</sub> max.	175 °C						
Package	GL41 (DO-213AB)						
Circuit configuration	Single						

#### **FEATURES**





- Ideal for automated placement
- Low forward voltage drop
- Low leakage current



- High forward surge capability
- Mosts MSL lovel 1 per LSTD 020 LE
- $\bullet$  Meets MSL level 1, per J-STD-020, LF maximum peak of 250  $^{\circ}\text{C}$
- Material categorization: for definitions of compliance please see <a href="https://www.vishay.com/doc?99912"><u>www.vishay.com/doc?99912</u></a>

#### 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 - 1<sup>st</sup> band denotes device type and 2<sup>nd</sup> band denotes repetitive peak reverse voltage rating

MAXIMUM RATINGS (T <sub>A</sub> = 25 °C unless otherwise noted)									
PARAMETER									
STANDARD RECOVERY DEVICE: 1 <sup>ST</sup> BAND IS WHITE	SYMBOL	1N6478	1N6479	1N6480	1N6481	1N6482	1N6483	1N6484	UNIT
Polarity color bands (2 <sup>nd</sup> 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 <sub>RMS</sub>	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 <sub>F(AV)</sub>	1.0				Α			
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	30					Α		
Max. full load reverse current, full cycle average at $T_A = 75~^{\circ}\text{C}$	I <sub>R(AV)</sub>	100					μΑ		
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175					°C		



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<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)											
PARAMETER	TEST CONDITIONS SYI		SYMBOL	1N6478	1N6479	1N6480	1N6481	1N6482	1N6483	1N6484	UNIT
Max. instantaneous	1.0 A	T <sub>A</sub> = 25 °C	V <sub>F</sub>	1.1							V
forward voltage	1.0 A	T <sub>A</sub> = 75 °C	V F	1.0						V	
Max. DC reverse		T <sub>A</sub> = 25 °C 10									
current at rated DC blocking voltage		T <sub>A</sub> = 125 °C	I <sub>R</sub>	200						μA	
Typical junction capacitance	4.0 V, 1	MHz	CJ	8.0					pF		

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)								
PARAMETER	SYMBOL 1N6478 1N6479 1N6480 1N6481 1N6482 1N6483 1N6484 UNI						UNIT	
Max. thermal resistance	$R_{\theta JA}$ (1)	50						°C/W
iviax. thermal resistance	R <sub>0JT</sub> (2)	20					C/VV	

#### **Notes**

<sup>(2)</sup> 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				

 $<sup>^{(1)}</sup>$  Thermal resistance from junction to ambient, 0.24" x 0.24" (6.0 mm x 6.0 mm) copper pads to each terminal

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### **RATINGS AND CHARACTERISTICS CURVES** (T<sub>A</sub> = 25 °C unless otherwise noted)

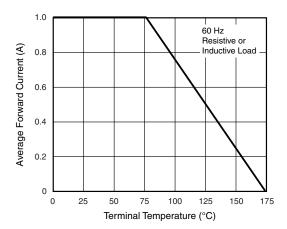


Fig. 1 - Forward Current Derating Curve

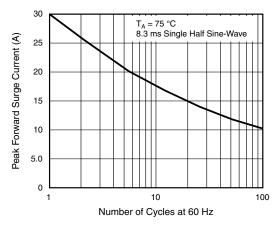


Fig. 2 - Max. Non-Repetitive Peak Forward Surge Current

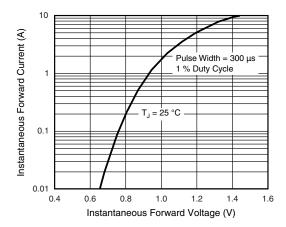


Fig. 3 - Typical Instantaneous Forward Characteristics

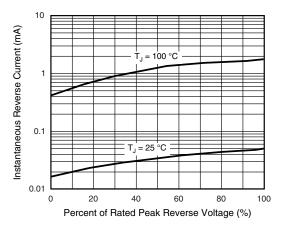


Fig. 4 - Typical Reverse Characteristics

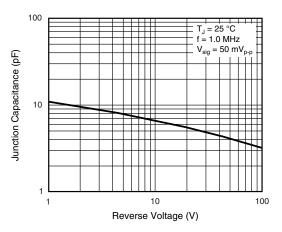


Fig. 5 - Typical Junction Capacitance

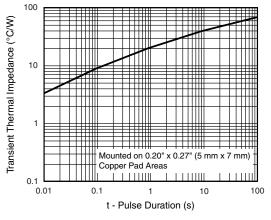


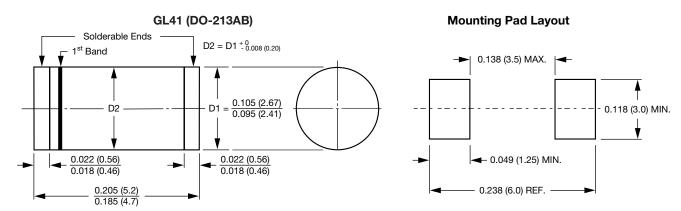
Fig. 6 - Typical Transient Thermal Impedance



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### **PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)



<sup>1&</sup>lt;sup>st</sup> band denotes type and positive end (cathode)



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