

# BYM12-150HE3/96 Datasheet

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DiGi Electronics Part Number	BYM12-150HE3/96-DG
Manufacturer	<a href="#">Vishay General Semiconductor - Diodes Division</a>
Manufacturer Product Number	BYM12-150HE3/96
Description	DIODE GEN PURP 150V 1A DO213AB
Detailed Description	Diode 150 V 1A Surface Mount DO-213AB

This model BYM12-150HE3/96 is available at DiGi Electronics.

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## Purchase and inquiry

**Manufacturer Product Number:**

BYM12-150HE3/96

**Series:**

SUPERECTIFIER®

**Technology:**

Standard

**Current - Average Rectified (Io):**

1A

**Speed:**

Fast Recovery =&lt; 500ns, &gt; 200mA (Io)

**Current - Reverse Leakage @ Vr:**

5 µA @ 150 V

**Mounting Type:**

Surface Mount

**Supplier Device Package:**

DO-213AB

**Base Product Number:**

BYM12

**Manufacturer:**

Vishay General Semiconductor - Diodes Division

**Product Status:**

Discontinued at Digi-Key

**Voltage - DC Reverse (Vr) (Max):**

150 V

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

1 V @ 1 A

**Reverse Recovery Time (trr):**

50 ns

**Capacitance @ Vr, F:**

20pF @ 4V, 1MHz

**Package / Case:**

DO-213AB, MELF (Glass)

**Operating Temperature - Junction:**

-65°C ~ 175°C

## Environmental & Export classification

**RoHS Status:**

ROHS3 Compliant

**REACH Status:**

REACH Unaffected

**HTSUS:**

8541.10.0080

**Moisture Sensitivity Level (MSL):**

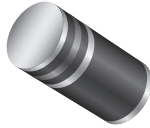
1 (Unlimited)

**ECCN:**

EAR99

## Surface-Mount Glass Passivated Ultrafast Rectifier

Superectifier®


**GL41 (DO-213AB)**

### FEATURES

- Superectifier structure for high reliability condition
- Cavity-free glass-passivated junction
- Ideal for automated placement
- Ultrafast reverse recovery time
- Low switching losses, high efficiency
- 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](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

### TYPICAL APPLICATIONS

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer, 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

### PRIMARY CHARACTERISTICS

$I_{F(AV)}$	1.0 A
$V_{RRM}$	50 V to 400 V
$I_{FSM}$	30 A
$t_{rr}$	50 ns
$V_F$	1.0 V, 1.25 V
$T_J$ max.	175 °C
Package	GL41 (DO-213AB)
Circuit configuration	Single

### MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)

PARAMETER	SYMBOL	BYM12-50	BYM12-100	BYM12-150	BYM12-200	BYM12-300	BYM12-400	UNIT
		EGL41A	EGL41B	EGL41C	EGL41D	EGL41F	EGL41G	
<b>FAST EFFICIENT DEVICE: 1<sup>ST</sup> BAND IS GREEN</b>								
Polarity color bands (2 <sup>nd</sup> band)		Gray	Red	Pink	Orange	Brown	Yellow	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	V
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	210	280	V
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	300	400	V
Maximum average forward rectified current at $T_T = 75$ °C	$I_{F(AV)}$	1.0						A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	30						A
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +175						°C



<b>ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	BYM12-50	BYM12-100	BYM12-150	BYM12-200	BYM12-300	BYM12-400	UNIT	
			EGL41A	EGL41B	EGL41C	EGL41D	EGL41F	EGL41G		
Max. instantaneous forward voltage	1.0 A	$V_F^{(1)}$	1.0				1.25			V
Max. DC reverse current at rated DC blocking voltage	$T_A = 25\text{ }^\circ\text{C}$	$I_R^{(1)}$	5.0							$\mu\text{A}$
	$T_A = 125\text{ }^\circ\text{C}$		50							
Max. reverse recovery time	$I_F = 0.5\text{ A}$ , $I_R = 1.0\text{ A}$ , $t_{rr} = 0.25\text{ A}$	$t_{rr}$	50							ns
Typical junction capacitance	4.0 V, 1 MHz	$C_J$	20				14			pF

**Note**

(1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle

<b>THERMAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)									
PARAMETER	SYMBOL	BYM12-50	BYM12-100	BYM12-150	BYM12-200	BYM12-300	BYM12-400	UNIT	
		EGL41A	EGL41B	EGL41C	EGL41D	EGL41F	EGL41G		
Maximum thermal resistance	$R_{\theta JA}^{(1)}$	60							$^\circ\text{C/W}$
	$R_{\theta JT}^{(2)}$	30							

**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

<b>ORDERING INFORMATION</b> (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
EGL41D-E3/96	0.114	96	1500	7" diameter plastic tape and reel
EGL41D-E3/97	0.114	97	5000	13" diameter plastic tape and reel

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

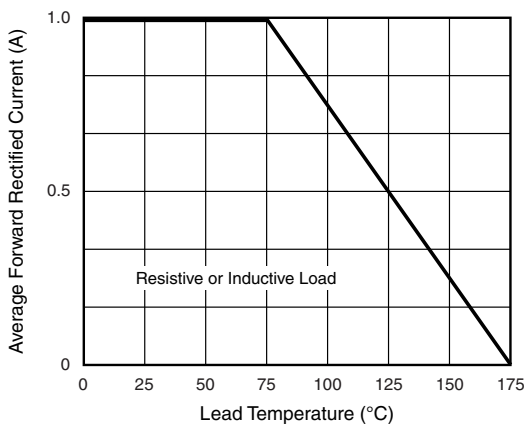


Fig. 1 - Maximum Forward Current Derating Curve

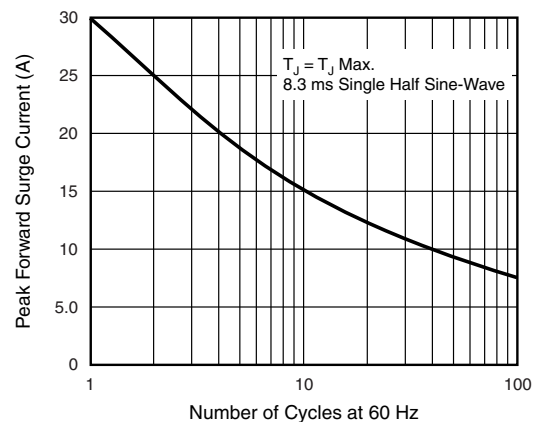


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

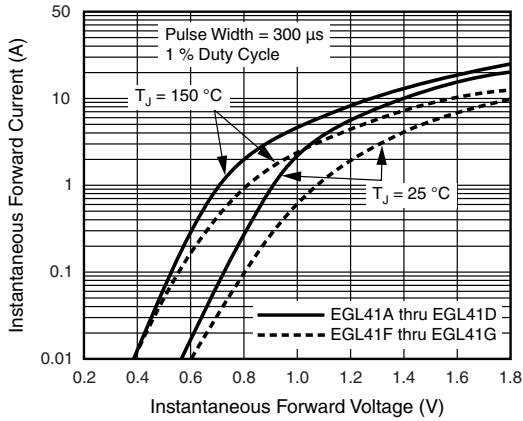


Fig. 3 - Typical Instantaneous Forward Characteristics

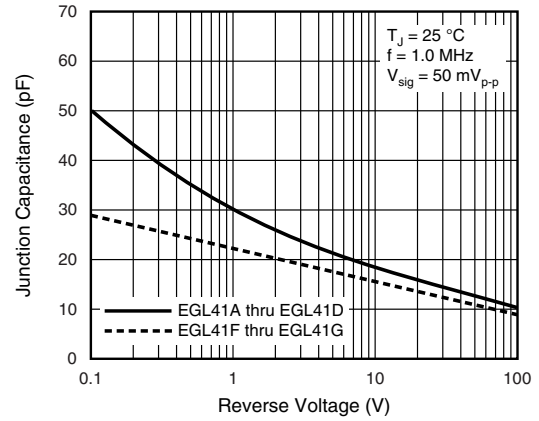


Fig. 5 - Typical Junction Capacitance

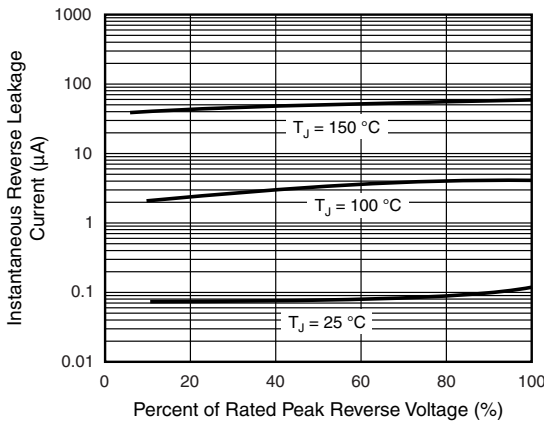


Fig. 4 - Typical Reverse Leakage Characteristics

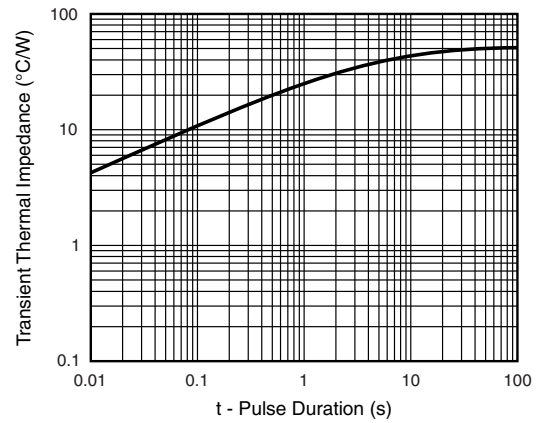
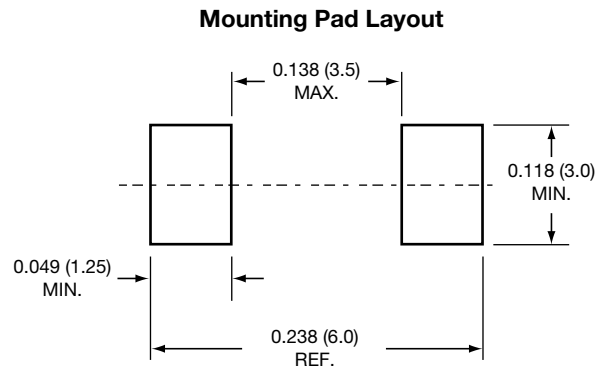
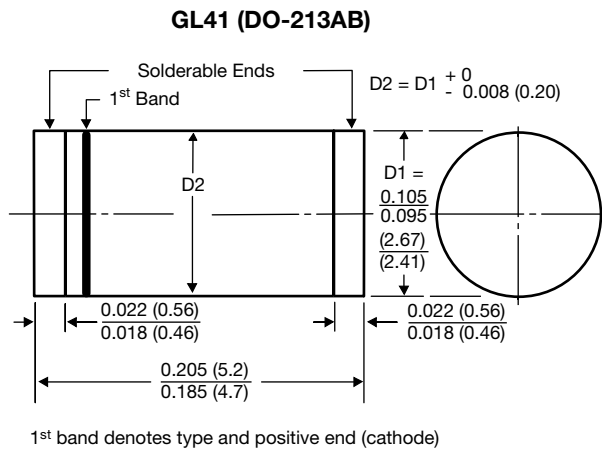


Fig. 6 - Typical Transient Thermal Impedance

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





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