

# **MURS140 - MURS160**

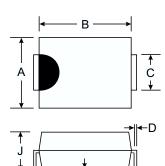
## **1.0A SURFACE MOUNT SUPER-FAST RECTIFIER**

#### **Features**

- Glass Passivated Die Construction
- Super-Fast Recovery Time For High Efficiency
- Low Forward Voltage Drop and High Current Capability
- Surge Overload Rating to 35A Peak
- Ideally Suited for Automated Assembly
- Plastic Material: UL Flammability Classification Rating 94V-0

### **Mechanical Data**

- Case: Molded Plastic
- Terminals: Solder Plated Terminal -Solderable per MIL-STD-202, Method 208
- Marking: MURS140: U1GB MURS160: U1JB
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.093 grams (approx.)
- Mounting Position: Any
- Ordering Information: See Page 3



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Dim	Min	Max	
Α	3.30	3.94	
В	4.06	4.57	
С	1.96	2.21	
D	0.15	0.31	
Е	5.00	5.59	
G	0.10	0.20	
н	0.76	1.52	
J	2.00	2.62	
All Dimensions in n			

SMB

84:...

14 ....

D:....

### Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	MURS140	MURS160	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	400	600	v
RMS Reverse Voltage	V <sub>R(RMS)</sub>	283	424	V
Average Rectified Output Current	Io	1.0 2.0		А
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	IFSM	3	5	A
Forward Voltage $ \begin{array}{l} @ \hspace{0.1cm} I_F = 1.0A, \hspace{0.1cm} T_J = 25^{\circ}C \\ @ \hspace{0.1cm} I_F = 1.0A, \hspace{0.1cm} T_J = 150^{\circ}C \end{array} $	V <sub>FM</sub>	1.2 1.0		V
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	I <sub>RM</sub>	5. 15		μ <b>A</b>
Reverse Recovery Time (Note 3)		50		ns
Forward Recovery Time (Note 4)		50		ns
Typical Junction Capacitance (Note 2)		45		pF
Typical Thermal Resistance, Junction to Terminal (Note 1)		13		K/W
Operating and Storage Temperature Range		-65 to +175		°C

Notes: 1. Unit mounted on PC board with 5.0 mm<sup>2</sup> (0.013 mm thick) copper pads as heat sink.

- 2. Measured at 1.0MHz and applied reverse voltage of 0V DC.
- 3. Measured with  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{rr} = 0.25A$ . See Figure 5.
- 4. Measured with IF = 1.0A, di/dt = 100A/µs, Duty Cycle  $\leq$  2.0%.

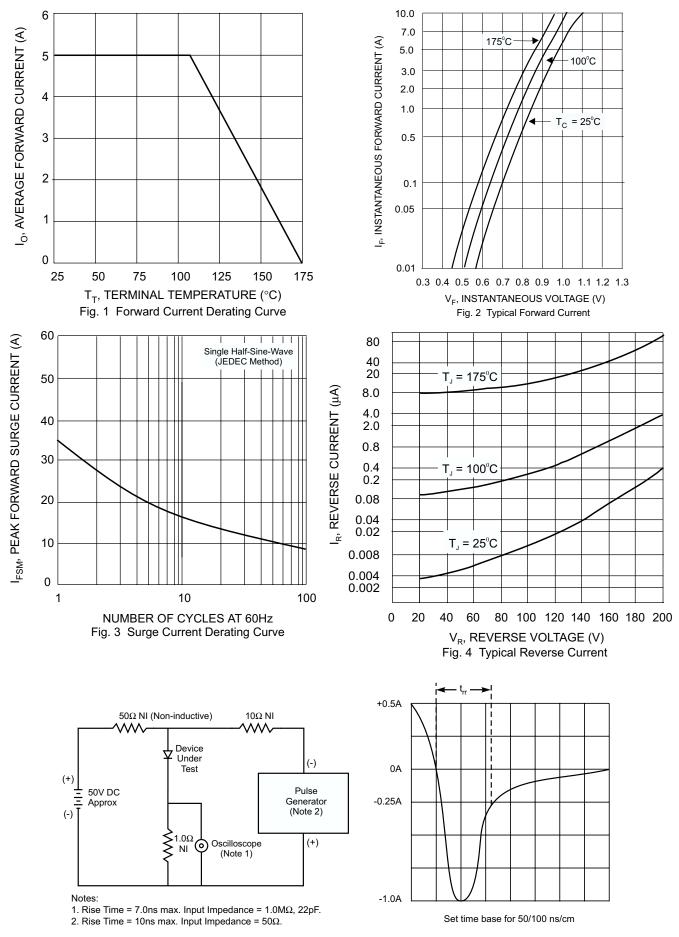


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

## Ordering Information (Note 5)

Device	Packaging	Shipping
MURS140-13 MURS160-13	SMB SMB	5000/Tape & Reel

Notes: 5. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

## **Marking Information**



XXX = Product type marking code (See Page 1) )|| = Manufacturers' code marking YWW = Date code marking Y = Last digit of year ex: 2 for 2002 WW = Week code 01 to 52