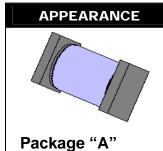


## 1N6661US thru 1N6663US

# VOIDLESS-HERMETICALLY-SEALED STANDARD RECOVERY GLASS RECTIFIERS

#### DESCRIPTION

These "standard recovery" rectifier diodes are military gualified to MIL-PRF-19500/587 and is ideal for high-reliability applications where a failure cannot be tolerated. They have a 500 mA rating with working peak reverse voltages from 225 to 600 volts and are hermetically sealed with void-less-glass construction using an internal "Category I" metallurgical bond. The axial-leaded package configurations are also available by deleting the "US" suffix (see separate data sheet for 1N6661 to 1N6663). Microsemi also offers numerous other rectifier products to meet higher and lower current ratings with various recovery time speed requirements including Fast and Ultrafast device types in both through-hole and surface mount packages.



www.Microsemi.com

IMPORTANT: For the most current data, consult MICROSEMI's website: http://www.microsemi.com

- FEATURES Popular JEDEC registered 1N6661 thru 1N6663 series
- Voidless hermetically sealed glass package
- **Triple-Layer Passivation**
- Internal "Category I" Metallurgical bonds
- Working Peak Reverse Voltage 225 to 600 Volts.
- JAN, JANTX, and JANTXV available per MIL-PRF-19500/587
- Axial-leaded equivalents also available without the "US" suffix (see 1N6661 thru 1N6663)

### MAXIMUM RATINGS

- Junction & Storage Temperature: -65°C to +175°C •
- Thermal Resistance: 35°C/W junction to end cap
- Average Rectified Forward Current (I<sub>O</sub>): 0.5 Amps @  $T_{EC}$  = 110°C and 0.150 Amps at  $T_{EC}$  = 150°C
- Forward Surge Current: 5 Amps @ 8.3 ms half-sine
- Solder Temperatures: 260°C for 10 s (maximum)

**APPLICATIONS / BENEFITS** 

or D-5A

- Standard recovery 0.5 Amp rectifiers 225 to 600 V
- Military and other high-reliability applications
- General rectifier applications including bridges, halfbridges, catch diodes, etc.
- Forward surge current capability •
- Extremely robust construction

•

- Low thermal resistance in small MELF package
- Inherently radiation hard as described in Microsemi MicroNote 050

## **MECHANICAL AND PACKAGING**

- CASE: Hermetically sealed void-less hard glass • with Tungsten slugs
- TERMINATIONS: End caps are copper with . Tin/Lead (Sn/Pb) finish
- MARKING: Body paint
- POLARITY: Cathode band
- TAPE & REEL option: Standard per EIA-481-B
- WEIGHT: 84 mg (approx)
- See package dimensions on last page

### **ELECTRICAL CHARACTERISTICS**

ТҮРЕ	WORKING PEAK REVERSE VOLTAGE V <sub>RWM</sub>	MINIMUM BREAKDOWN VOLTAGE V <sub>BR</sub> @ 100μA	AVERAGE RECTIFIED CURRENT (NOTE 2) I <sub>O</sub>		MAXIMUM FORWARD VOLTAGE V <sub>F</sub> @ 0.4 A (PULSED)	MAXIMUM REVERSE CURRENT I <sub>R</sub> @ V <sub>RWM</sub>		MAXIMUM SURGE CURRENT (NOTE 1) I <sub>FSM</sub>
	VOLTS	VOLTS	AMPS		VOLTS	μΑ		AMPS
			25°C	150°C		25°C	150°C	
1N6661US	225	270	0.5	0.15	1.0	0.05	300	5
1N6662US	400	480	0.5	0.15	1.0	0.05	300	5
1N6663US	600	720	0.5	0.15	1.0	0.05	300	5

**NOTE 1:**  $T_A = 25^{\circ}C$ , 10 surges of 8.3 ms @ 1 minute intervals

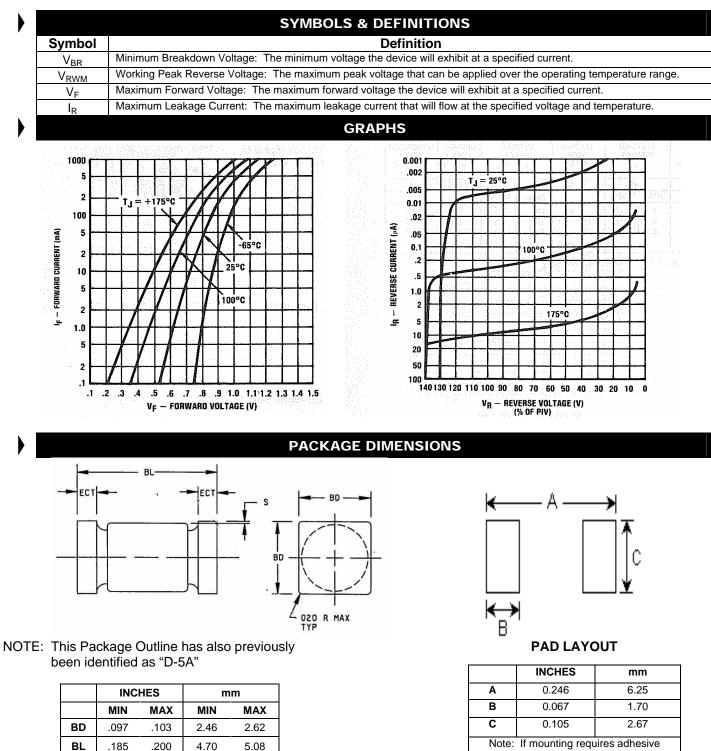
**NOTE 2:** Linearly derate at 8.75 mA/°C between  $T_{EC} = 110^{\circ}C$  to 150°C and 6.0 mA/°C between  $T_{EC} = 150^{\circ}C$  to 175°C

1N6661US - 1N6663US



# 1N6661US thru 1N6663US

# VOIDLESS-HERMETICALLY-SEALED STANDARD RECOVERY GLASS RECTIFIERS



separate from the solder, an additional 0.060 inch diameter contact may be placed in the center between the pads

as an optional spot for cement.

Copyright © 2008 1-03-2008

ECT

s

.019

.003

.028

---

0.48

0.08

0.71

---

Microsemi Scottsdale Division 8700 E. Thomas Rd. PO Box 1390, Scottsdale, AZ 85252 USA, (480) 941-6300, Fax: (480) 947-1503