

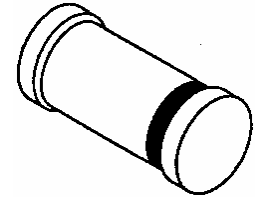
**500 mW GLASS SURFACE MOUNT
ZENER DIODES**

DESCRIPTION

The 1N5221BUR thru 1N5281BUR series of 0.5 watt Zener Voltage Regulators provides a surface mount equivalent to the popular JEDEC registered 1N5221B to 1N5281B for 2.4 to 200 volts in standard 5% tolerances as well as tighter tolerances identified by different suffix letters on the part number. These are also available with an internal-metallurgical-bond option by adding a "-1" suffix (see separate data sheet). Microsemi also offers numerous other Zener products to meet higher and lower power applications.

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

APPEARANCE



DO-213AA

FEATURES

- Surface mount equivalents to the JEDEC registered 1N5221 thru 1N5281B series
- Hermetically sealed surface mount package
- RoHS Compliant devices available by adding "e3" suffix
- Internal metallurgical bond option available by adding a "-1" suffix (see separate data sheet for same part numbers with "-1" suffix)
- DO-7 or DO-35 glass body axial-leaded Zener equivalents also available per JEDEC registration (see separate data sheet for part numbers 1N5221 thru 1N5281B series)

MAXIMUM RATINGS

- Operating and Storage temperature: -65°C to +175°C
- Thermal Resistance: 150°C/W junction to end cap and 300°C/W junction to ambient when mounted on FR4 PC board (1 oz Cu) with recommended footprint (see last page)
- Steady-State Power: 0.5 watts at end cap temperature $T_{EC} \leq 100^{\circ}\text{C}$ or ambient temperature $T_A \leq 25^{\circ}\text{C}$ when mounted on FR4 PC board as described for thermal resistance above (see Figure 2 for derating)
- Forward voltage @200 mA: 1.1 volts (maximum)
- Solder Temperatures: 260°C for 10 seconds (max)

APPLICATIONS / BENEFITS

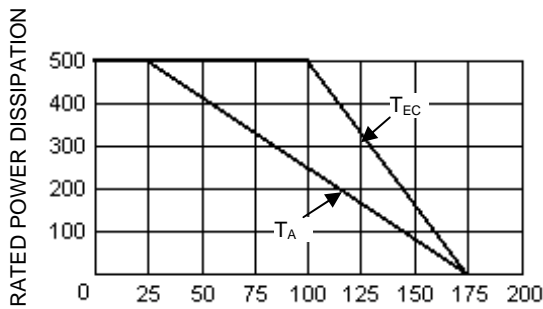
- Regulates voltage over a broad operating current and temperature range
- Selection from 2.4 to 200 V
- Standard voltage tolerances are plus/minus 5% with B suffix identification and 10% with A suffix
- Tight tolerances available in plus or minus 2% or 1% with C or D suffix respectively
- Nonsensitive to ESD per MIL-STD-750 Method 1020
- Minimal capacitance (see Figure 3)
- Inherently radiation hard as described in Microsemi MicroNote 050

MECHANICAL AND PACKAGING

- CASE: Hermetically sealed glass DO-213AA (SOD80 or MLL34) MELF style package
- FINISH: End caps Tin-Lead or RoHS Compliant annealed matte-Tin plating solderable per MIL-STD-750, method 2026
- POLARITY: Cathode indicated by band where diode is to be operated with the banded end positive with respect to the opposite end for Zener regulation
- MARKING: cathode band only
- TAPE & REEL option: Standard per EIA-481-B with 12 mm tape, 2000 per 7 inch reel or 5000 per 13 inch reel (add "TR" suffix to part number)
- WEIGHT: 0.04 grams
- See package dimensions on last page

- NOTE 1:** Table as shown lists type numbers, which indicate a tolerance of +/-20% with guaranteed limits on only V_Z , I_R , and V_F . Devices with guaranteed limits on all six parameters are indicated by suffix "A" for +/-10%, "B" for +/-5%, "C" for +/-2%, and "D" for +/-1% tolerance.
- NOTE 2:** The electrical characteristics are measured after allowing the device to stabilize for 20 seconds.
- NOTE 3:** Temperature coefficient (α_{VZ}). Test conditions for temperature coefficient are as follows:
- $I_{ZT} = 7.5 \text{ mA}$, $T_1 = 25^\circ\text{C}$,
 $T_2 = 125^\circ\text{C}$ (1N5221AUR & BUR thru 1N5242AUR & BUR)
 - $I_{ZT} = \text{Rated } I_{ZT}$, $T_1 = 25^\circ\text{C}$,
 $T_2 = 125^\circ\text{C}$ (1N5243AUR & BUR thru 1N5281AUR & BUR)
- Device to be temperature stabilized with current applied prior to reading breakdown voltage at the specified ambient temperature.
- NOTE 4:** These devices may be ordered as either 1N5221UR thru 1N5281BUR or as MLL5221 thru MLL5281B part numbers.

GRAPHS



T_{EC} – End Cap Temperature ($^\circ\text{C}$), or
 T_A Ambient Temperature on FR4 PC BOARD

FIGURE 1
POWER DERATING CURVE

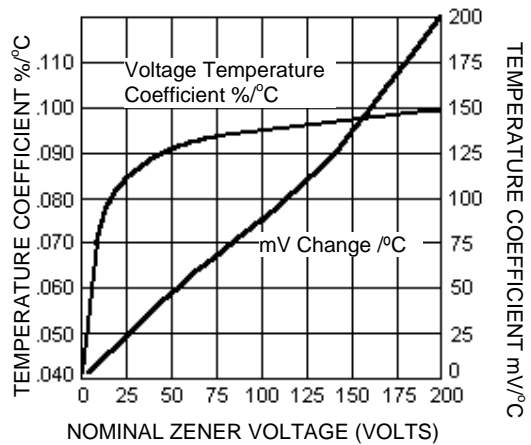


FIGURE 2
ZENER VOLTAGE TEMPERATURE
COEFFICIENT vs. ZENER VOLTAGE

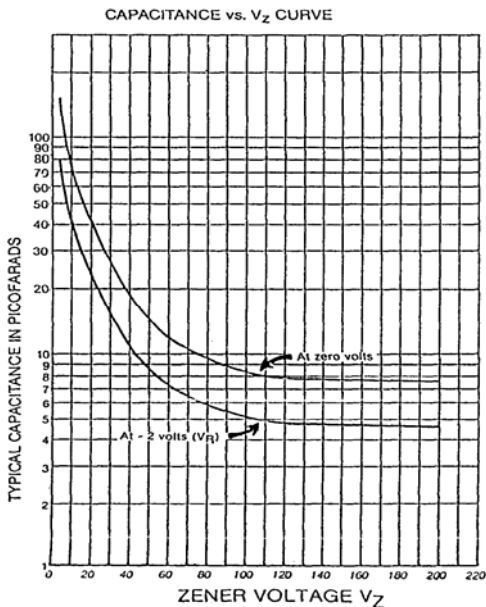
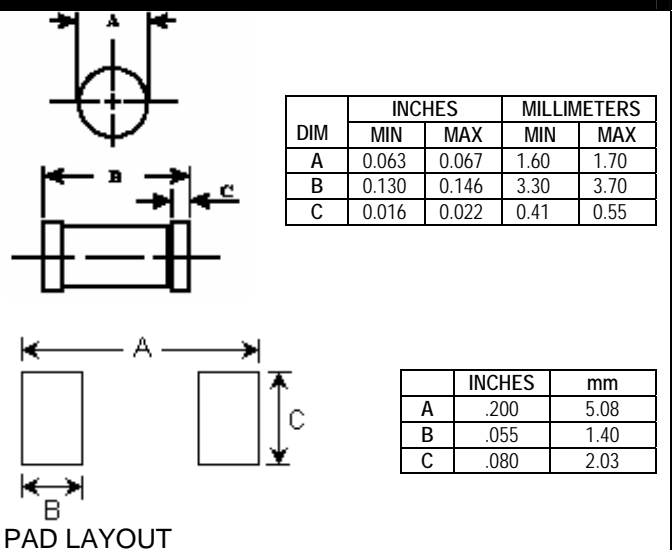


FIGURE 3
CAPACITANCE vs. ZENER VOLTAGE
(TYPICAL)

PACKAGE DIMENSIONS




Manufacture Diodes, IGBTs, LED Driver, Small Signal & Analog, RF Power, SCR, WLAN Power Amplifi - Windows Internet Explorer

http://www.microsemi.com/catalog/partlist.asp?PARTNO=CDLL5276B

File Edit View Favorites Tools Help

Manufacture Diodes, IGBTs, LED Driver, Small Signal ...


[ABOUT MICROSEMI](#) | [NEWS](#) | [EVENTS](#) | [CONTACTS](#) | [EMPLOYMENT](#) | [HOME](#)

keyword search:
 part number search:

[Products](#) | [Sales Contacts](#) | [Support](#) | [Requests](#) | [Careers](#) | [Investors](#)

1 products:

Click part number link below for additional product information.

PartNo	ROHS	PB Free	Qpl	Division	Package	PartType	Data Sheet	Qual Data	Distributor Stock Check
CDLL5276B				Ireland	DO-213AA	Zener Voltage Regulator Diode			CDLL5276B

[Privacy Policy](#) | [Site Map](#) | [Terms & Conditions](#)

[PPG Webex Portal](#) | [PPG Extranet Login](#)

[Avionics](#) | [Backlight Inverters](#) | [L-Band Radar](#) | [LED Driver](#) | [LDMOS & VDMOS](#) | [MOSFETs, IGBTs, & Diodes](#) | [Pin Diodes](#) | [Power Modules](#) | [RF Power & Bipolar Transistors](#) | [S-Band Radar](#) | [SCR](#) | [Thyristors](#) | [Varactor Diode](#) | [WLAN Power Amplifier](#) | [Zener Diode](#) | [Power Over Ethernet](#) | [IEEE802.3af](#) | [PoE ICs](#)

Copyright © 2010 Microsemi Corporation. All rights reserved. The Endwave logo is a registered trademark of Endwave Corporation.

Internet 100%