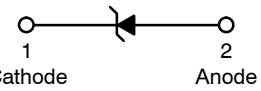
# Zener Protection Diode

# NZ8P26VMX2WT5G




The NZ8P26V is designed for applications requiring transient overvoltage ESD protection. They are intended for use to protect voltage sensitive components from ESD and other harmful transient voltage events. This device provides a single channel of uni−directional protection in an, ultra−compact X2DFNW2 1.0 x 0.6 mm package.

### Features

- Precise Clamping Voltage
- High ESD Ratings
- Wettable Flank Package for Optimal Automated Optical Inspection (AOI)
- SZ Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC−Q101 Qualified and PPAP Capable
- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant

### Typical Applications

- Automotive ECU's
- IVN – In Vehicle Networking
- Voltage Sensitive Circuits

**X2DFNW2**
**CASE 711BG**

### DEVICE MARKING INFORMATION


XX = Specific Device Code
M = Date Code

### ORDERING INFORMATION

| Device | Package | Shipping† |
|---|---|---|
| NZ8P26VMX2WT5G | X2DFNW2 (Pb−Free) | 8000 / Tape & Reel |
| SZNZ8P26VMX2WT5G | | |

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

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

| Rating | Symbol | Value | Unit |
|---|---|---|---|
| IEC 61000−4−2 Contact<br>IEC 61000−4−2 Air<br>ISO 10605 Contact (330 pF / 330 Ω)<br>ISO 10605 Contact (330 pF / 2 kΩ)<br>ISO 10605 Contact (150 pF / 2 kΩ) | ESD | ±30<br>±30<br>±30<br>±30<br>±30 | kV |
| Maximum Reverse Peak Pulse Current (8 x 20 μs)<br>Maximum Reverse Peak Pulse Current (10 x 1000 μs) | $I_{PP}$ | 4.5<br>1.0 | A |
| Junction and Storage Temperature Range | $T_J$, $T_{stg}$ | −55 to +150 | °C |
| Lead Solder Temperature − Maximum (10 Second Duration) | $T_L$ | 260 | °C |

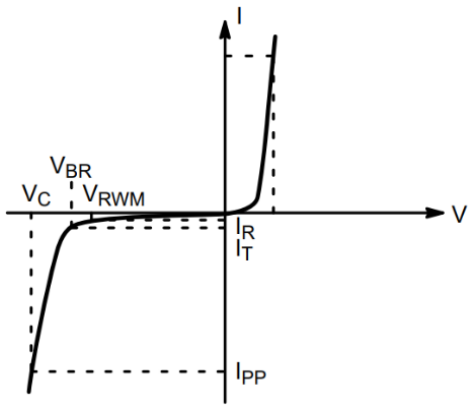
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

## ELECTRICAL CHARACTERISTICS

($T_A$ = 25°C unless otherwise noted)

| Symbol | Parameter |
|---|---|
| $I_{PP}$ | Maximum Reverse Peak Pulse Current |
| $V_C$ | Clamping Voltage @ $I_{PP}$ |
| $V_{RWM}$ | Working Peak Reverse Voltage |
| $I_R$ | Maximum Reverse Leakage Current @ $V_{RWM}$ |
| $V_{BR}$ | Breakdown Voltage @ $I_T$ |
| $I_T$ | Test Current |

*See Application Note AND8308/D for detailed explanations of datasheet parameters.




## ELECTRICAL CHARACTERISTICS ($T_A$ = 25°C unless otherwise noted)

| Parameter | Symbol | Condition | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Reverse Working Voltage | $V_{RWM}$ | (Note 1) | | | 26 | V |
| Breakdown Voltage | $V_{BR}$ | $I_T$ = 5 mA (Note 2)<br>$I_T$ = 5 mA @ 150°C | 32.2 | 33 | 33.8<br>38.8 | V |
| Reverse Leakage Current | $I_R$ | $V_{RWM}$ = 26 V | | 10 | 100 | nA |
| Clamping Voltage (8/20 μs) | $V_C$ | $I_{PP}$ = 1.0 A | | | 38 | V |
| Clamping Voltage (8/20 μs) | $V_C$ | $I_{PP}$ = 4.5 A | | | 56 | V |
| Clamping Voltage (10/1000 μs) | $V_C$ | $I_{PP}$ = 0.87 A | | | 46 | V |
| Junction Capacitance | $C_J$ | $V_R$ = 0 V, f = 1 MHz | | 19 | | pF |

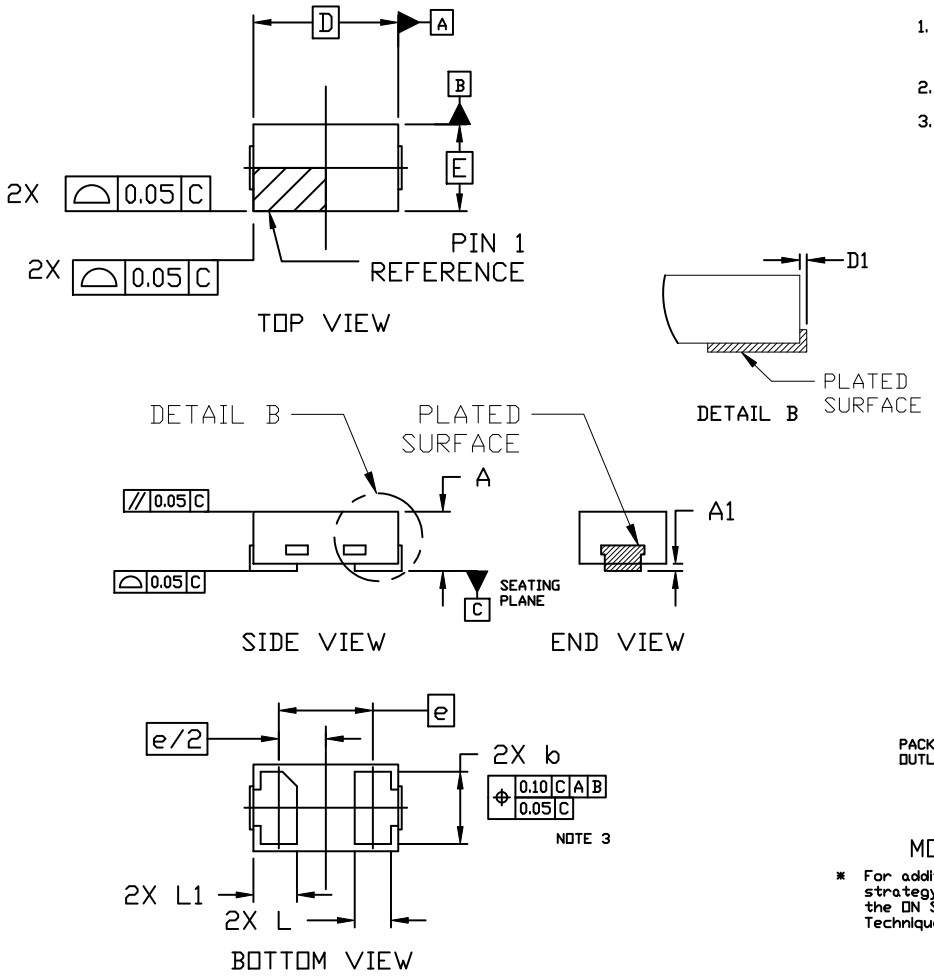
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

1. Surge protection devices are normally selected according to the working peak reverse voltage ($V_{RWM}$), which should be equal or greater than the DC or continuous peak operating voltage level.
2. $V_{BR}$ is measure at pulse test current $I_T$.

# NZ8P26VMX2WT5G

## PACKAGE DIMENSIONS

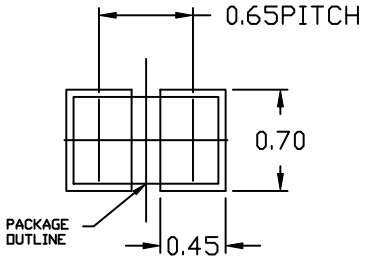
**X2DFNW2 1.0x0.6, 0.65P**
CASE 711BG
ISSUE C




NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 2009.
2. CONTROLLING DIMENSION: MILLIMETERS
3. DIMENSION b APPLIES TO THE PLATED TERMINAL AND IS MEASURED BETWEEN 0.15 AND 0.30 FROM THE TERMINAL TIP.

| | MILLIMETERS | | |
|---|---|---|---|
| DIM | MIN. | NOM. | MAX. |
| A | 0.34 | 0.37 | 0.40 |
| A1 | --- | --- | 0.05 |
| b | 0.45 | 0.50 | 0.55 |
| D | 0.90 | 1.00 | 1.10 |
| D1 | --- | --- | 0.05 |
| E | 0.50 | 0.60 | 0.70 |
| e | 0.65 BSC | | |
| L | 0.22 REF | | |
| L1 | 0.24 | 0.285 | 0.34 |




RECOMMENDED
MOUNTING FOOTPRINT

* For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.



### PUBLICATION ORDERING INFORMATION


**LITERATURE FULFILLMENT**:
**Email Requests to:** orderlit@onsemi.com

**onsemi Website:** www.onsemi.com

**TECHNICAL SUPPORT**
**North American Technical Support:**
Voice Mail: 1 800-282-9855 Toll Free USA/Canada
Phone: 011 421 33 790 2910

**Europe, Middle East and Africa Technical Support:**
Phone: 00421 33 790 2910
For additional information, please contact your local Sales Representative


◊