

**Microsemi Corp.**  
The diode experts

SANTA ANA, CA

For more information call:  
(714) 979-8220

**ALSO  
AVAILABLE IN  
SURFACE  
MOUNT**

**IN6461 thru  
IN6468 and  
IN6469 thru  
IN6476**

## FEATURES

- HIGH SURGE CAPACITY PROVIDES TRANSIENT PROTECTION FOR MOST CRITICAL CIRCUITS.
- TRIPLE LAYER PASSIVATION.
- SUBMINIATURE.
- METALLURGICALLY BONDED.
- VOIDLESS HERMETICALLY SEALED GLASS PACKAGE.
- DYNAMIC IMPEDANCE AND REVERSE LEAKAGE LOWEST AVAILABLE.
- JAN/TX/TXV TYPES AVAILABLE PER MIL-S-19500/551, 552.

## MAXIMUM RATINGS

Operating Temperature:  $-65^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$ .

Storage Temperature:  $-65^{\circ}\text{C}$  to  $+200^{\circ}\text{C}$ .

Surge Power 500W & 1500W

Power @  $T_A = 25^{\circ}\text{C}$  (%) 2.5W 500W Type

Power @  $T_L = 50^{\circ}\text{C}$  (%) 5.0W 1500W Type

## ELECTRICAL CHARACTERISTICS

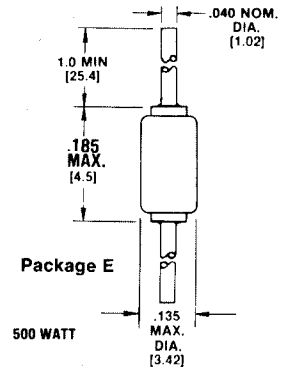
| SERIES TYPE |        | BREAK DOWN VOLTAGE $V_{BR}$ MIN. | TEST CURRENT $I_T$ |    | WORKING PEAK VOLTAGE $V_{WM}$ | MAX LEAKAGE CURRENT $I_0$ |                  | MAX CLAMPING VOLTAGE $V_C$ | MAX PEAK PULSE CURRENT $I_{PP}$ |       | MAX. TEMP. COEF. OF $V_{BR}$ |
|-------------|--------|----------------------------------|--------------------|----|-------------------------------|---------------------------|------------------|----------------------------|---------------------------------|-------|------------------------------|
| 500W        | 1500W  | Vdc                              | mA dc              |    | Vdc                           | $\mu\text{A dc}$          | $\mu\text{A dc}$ | V(pk)                      | A(pk)                           | A(pk) | %/ $^{\circ}\text{C}$        |
| IN6461      | IN6469 | 5.6                              | 25                 | 50 | 5                             | 3000                      | 5000             | 9.0                        | 56                              | 167   | 0.04                         |
| IN6462      | IN6470 | 6.5                              | 20                 | 50 | 6                             | 2500                      | 5000             | 11.0                       | 46                              | 137   | 0.04                         |
| IN6463      | IN6471 | 13.0                             | 5                  | 10 | 12                            | 500                       | 1000             | 22.6                       | 22                              | 66    | 0.05                         |
| IN6464      | IN6472 | 16.4                             | 5                  | 10 | 15                            | 500                       | 1000             | 26.5                       | 19                              | 57    | 0.06                         |
| IN6465      | IN6473 | 27.0                             | 2                  | 5  | 24                            | 50                        | 100              | 41.4                       | 12                              | 36.5  | .084                         |
| IN6466      | IN6474 | 33.0                             | 1                  | 1  | 30.5                          | 3                         | 5                | 47.5                       | 11                              | 32    | .093                         |
| IN6467      | IN6475 | 43.7                             | 1                  | 1  | 40.3                          | 2                         | 5                | 63.5                       | 8                               | 24    | .094                         |
| IN6468      | IN6476 | 54.0                             | 1                  | 1  | 51.6                          | 2                         | 5                | 78.5                       | 6                               | 19    | .096                         |
| NOTES       |        | 1                                | 2                  | 3  | 1                             | 2                         | 3                | 1                          | 2                               | 3     | 1                            |

**NOTE 1:** Applies to both 500W and 1500W series.

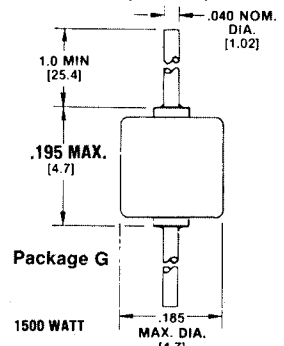
**NOTE 2:** Applies to only 500W series.

**NOTE 3:** Applies to only 1500W series.

## TRANSIENT SUPPRESSORS



**FIGURE 1  
(NOTE 2)**



**FIGURE 1A  
(NOTE 3)**

## MECHANICAL CHARACTERISTICS

CASE: Hermetically sealed glass case.

LEAD MATERIAL: Tinned copper or silver clad copper.

MARKING: Body painted, alpha numeric.

POLARITY: Cathode band.

# 1N6461 thru 1N6468 & 1N6469 thru 1N6476

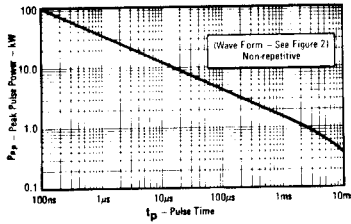


Figure 1. Pulse Time  
1N6469 Series

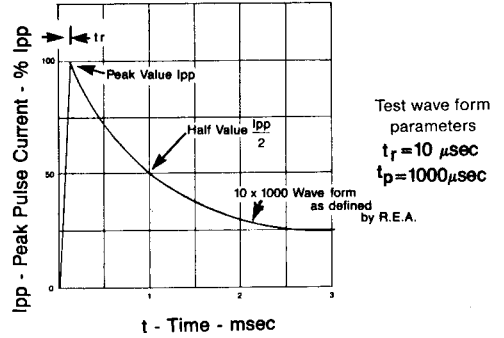


Figure 2. Current Impulse Waveform

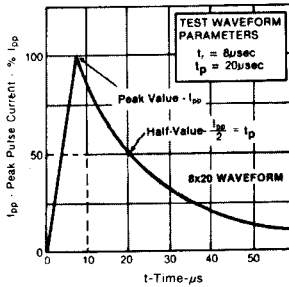


Figure 3. Current Impulse Waveform

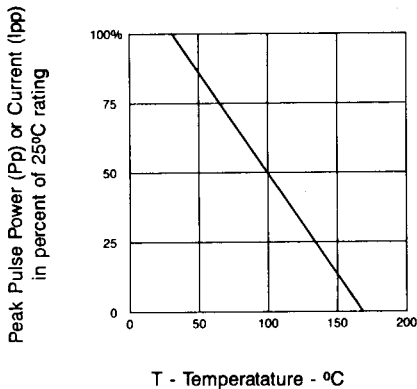


Figure 4. Derating Curve

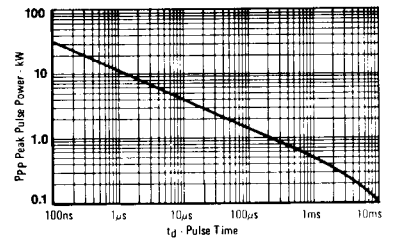


Figure 5. Pulse Waveform  
1N6461 Series