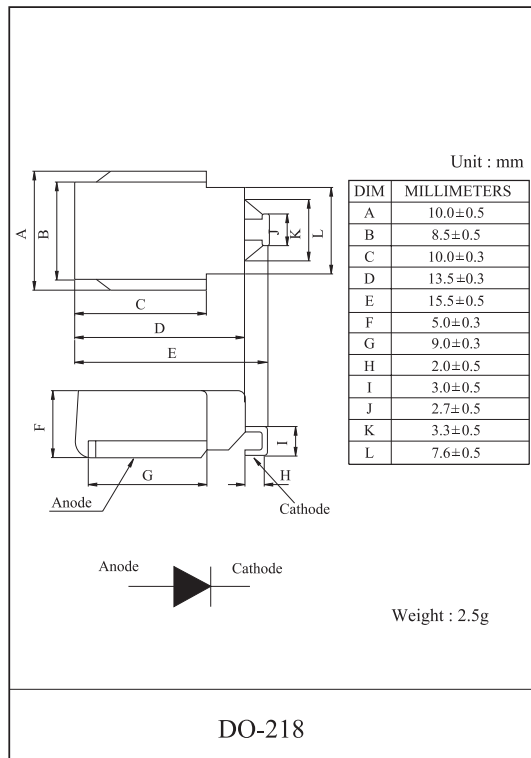


**BEST SUITED FOR OVERVOLTAGE PROTECTION OF ELECTRONIC SYSTEM :**  
 ELECTRONIC SYSTEM FOR USE IN AUTOMOBILES  
 ELECTRONIC SYSTEM FOR COMMERCIAL USE  
 ELECTRONIC SYSTEM FOR INDUSTRIAL USE  
 FOR COMMUNICATIONS, CONTROLS, MEASURING INSTRUMENTS, ETC.

### FEATURES

- Excellent clamp voltage characteristics that protect electronic system from any kind of surge.
- High surge power withstanding capabilities that absorb load dump surge.
- Excellent surge responsibility for steep surge absorption.
- Surface mount type is available for easy applications. Axial lead type is also available.
- Although the typical zener voltage is  $V_Z=27V$ , we can provide the products other than the typical values.
- Corresponds to taping packages. (500P/Reel)
- Automotive AEC-Q101 Qualified.
- MSL Level 1 guaranteed ( $T_{peak} = 260$  )



### MAXIMUM RATING (Ta=25 )

| CHARACTERISTIC   | SYMBOL    | RATING  | UNIT |
|--|-----------|---------|------|
| Allowable Power Dissipation (Note 1)                                     | P         | 5       | W    |
| Peak Pulse Power Dissipation With 10/1,000us wave form                   | $P_{PPM}$ | 3,600   | W    |
| Peak Pulse Power Dissipation With 10/10,000us wave form                  | $P_{PPM}$ | 2,800   | W    |
| Non-Repetitive Peak Reverse Surge Current (See Fig.1 for the exponents.) | $I_{RSM}$ | 70      | A    |
| Operating Junction Temperature   | $T_j$     | -55 175 |      |
| Storage Temperature Range  | $T_{stg}$ | -55 175 |      |

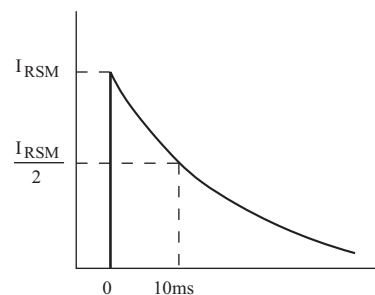


Fig 1.

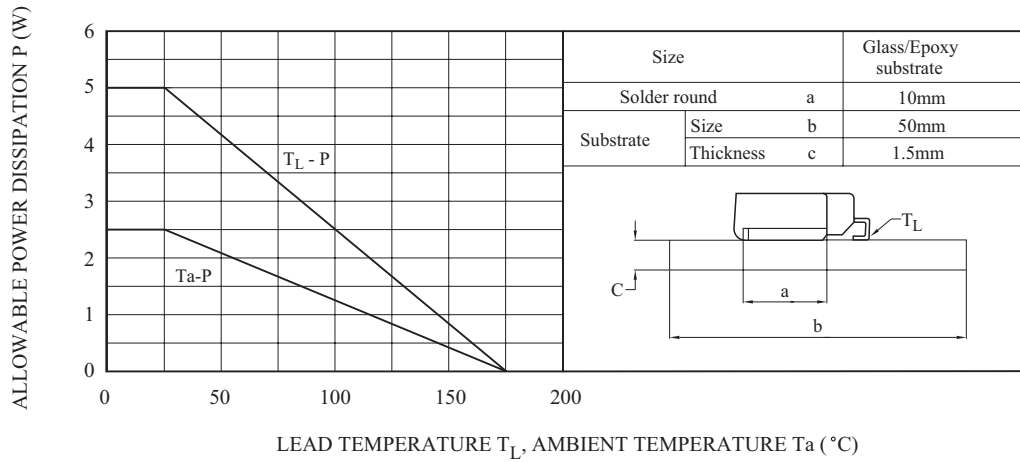
Note 1 : Lead tip temperature  $T_L=25$  .

### ELECTRICAL CHARACTERISTICS (Ta=25 )

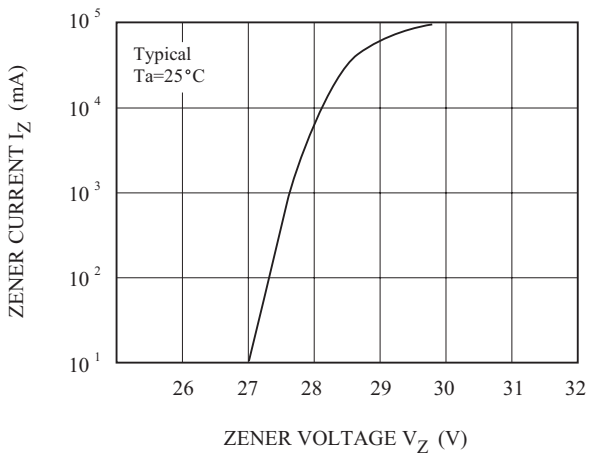
| CHARACTERISTIC          | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT    |
|-------------------------|--------|----------------|------|------|------|---------|
| Zener Voltage           | $V_Z$  | $I_Z=10mA$     | 24.0 | 27.0 | 30.0 | V       |
| Operating Resistance    | $r_d$  | $I_Z=10mA$     | -    | -    | 30   |         |
| Temperature Coefficient | $T$    | $I_Z=10mA$     | -    | 23   | 36   | mV/     |
| Forward Voltage         | $V_F$  | $I_F=6A$       | -    | -    | 1.0  | V       |
|                         |        | $I_F=100A$     | -    | -    | 1.2  | V       |
| Reverse Current         | $I_R$  | $V_R=22V$      | -    | -    | 10   | $\mu A$ |
| Clamping Voltage        | $V_C$  | $I_{RSM}=55A$  | -    | -    | 40   | V       |

# Z5W27V

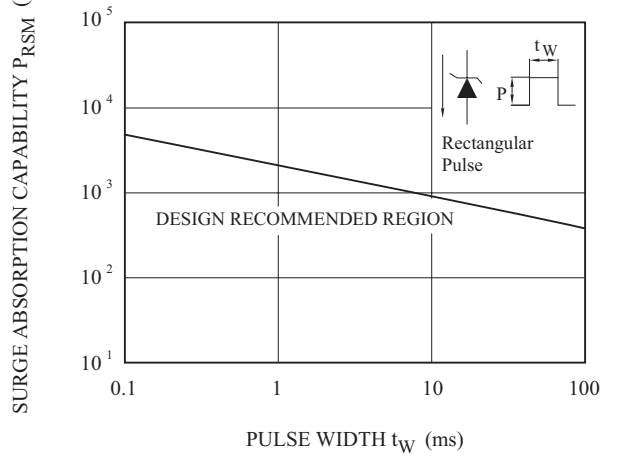
P -  $T_L, T_a$



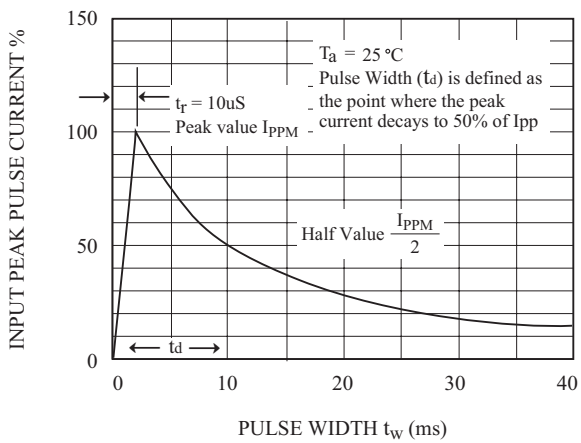
$I_Z - V_Z$



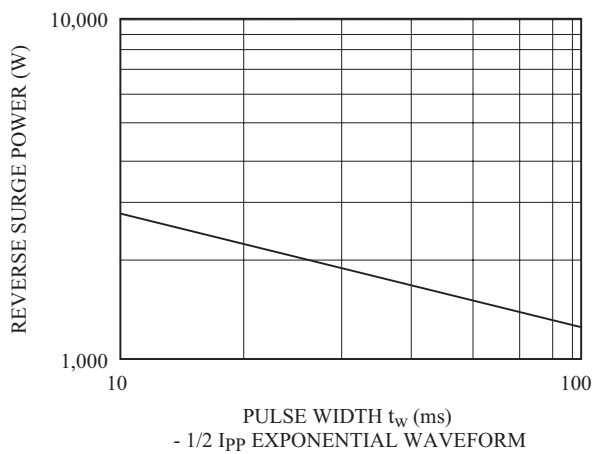
$P_{RSM} - t_w$



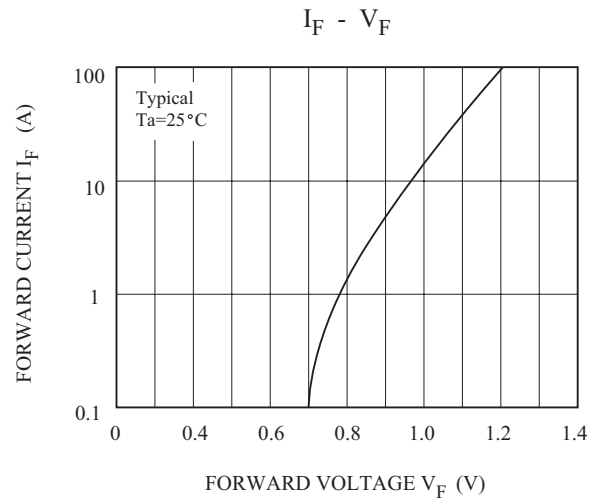
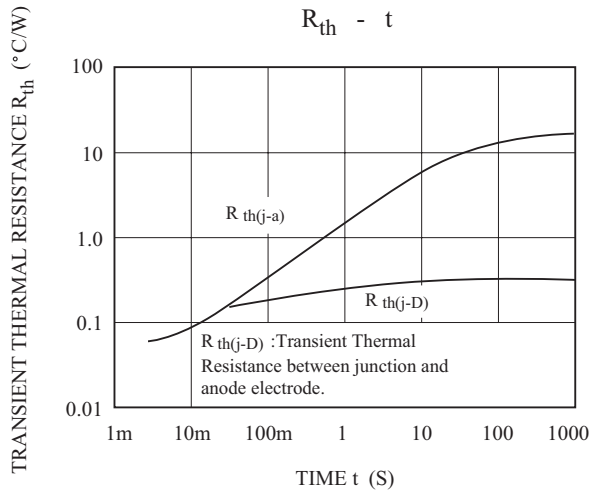
PULSE WAVEFORM



REVERSE POWER CAPABILITY



# Z5W27V



## LOAD DUMP POWER CHARACTERISTICS (10ms EXPONENTIAL WAVEFORM)

