

# 5Z27, 5Z30

## POWER SURGE SUPPRESSOR

--- designed for use as a reverse power transient suppressor to protect automotive electrical equipment from over-voltage conditions.

- Excellent Clamp Voltage Characteristics
- High Power Capability
- Rapidly Surge Absorption
- Excellent Surge Responsibility
- Various Lead Types
- Non-Standard Voltage Available

## ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

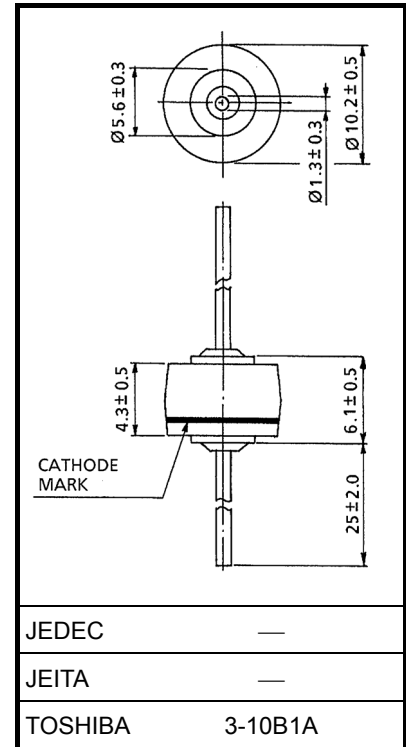
CHARACTERISTIC	SYMBOL	RATING	UNIT
Allowable Power Dissipation (Note 1)	P	5	W
Non-Repetitive Peak Reverse Surge Current (Ta=25°C) (Fig.1)	$I_{RSM}$	62	A
Junction Temperature	$T_j$	-40~150	°C
Storage Temperature	$T_{stg}$	-40~150	°C

Note 1: Lead tip temperature  
 $T_L=25^\circ\text{C}$

Note 2: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Unit: mm



Weight: 2.7 g (typ.)

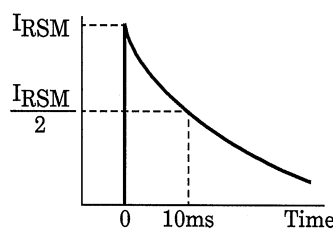
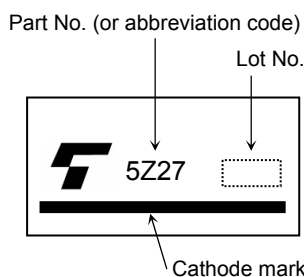


Fig.1

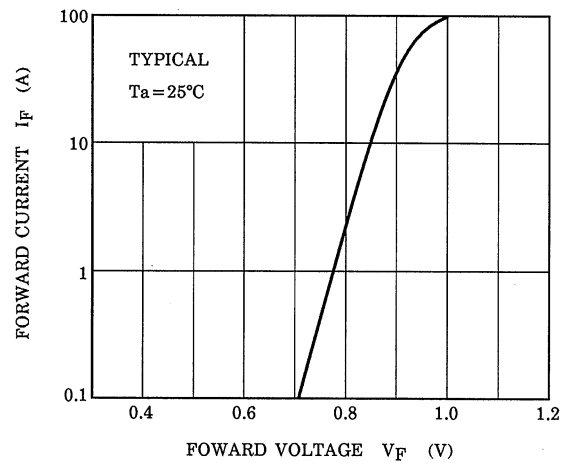
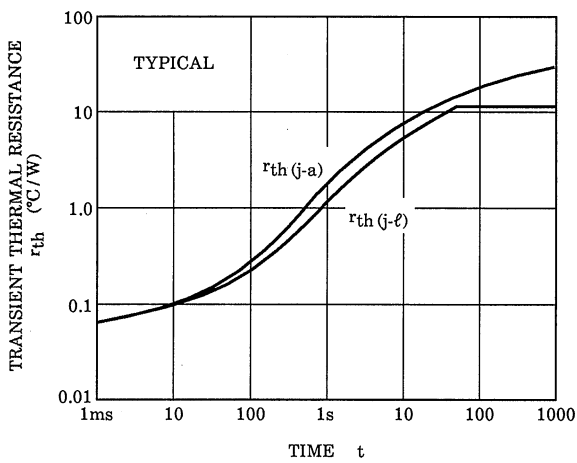
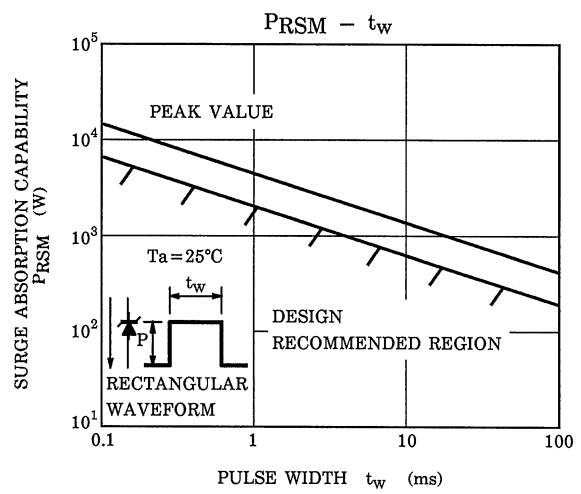
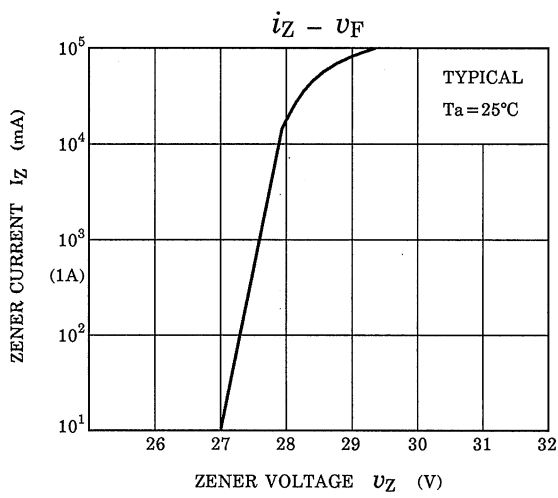
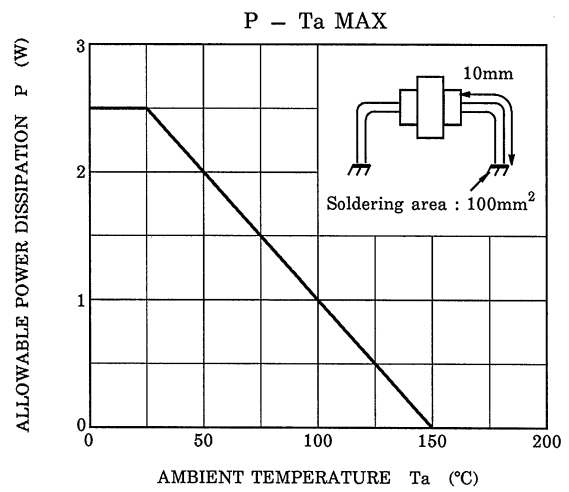
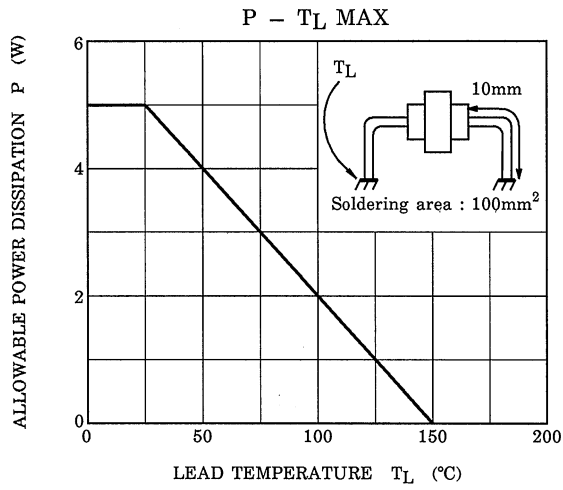
## MARKING



Abbreviation Code	Part No.
5Z27	5Z27
5Z30	5Z30

## ELECTRICAL CHARACTERISTICS (Ta=25°C)

TYPE	ZENER VOLTAGE $V_Z$ (V) ( $I_Z=10\text{mA}$ )			ZENER IMPEDANCE $r_d$ ( $\Omega$ ) ( $I_Z=10\text{mA}$ )	TEMPERATURE COEFFICIENT $\alpha_T$ (mV / °C) ( $I_Z=10\text{mA}$ )		FORWARD VOLTAGE $V_F$ (V) ( $I_F=6\text{A}$ )	REVERSE CURRENT $I_R$ ( $\mu\text{A}$ ) ( $V_R=22\text{V}$ )
	MIN.	TYP.	MAX.	MAX.	TYP.	MAX.	MAX.	MAX.
5Z27	24	27	30	30	23	36	1.2	10
5Z30	27	30	33	30	25	40	1.2	10



**RESTRICTIONS ON PRODUCT USE**

20070701-EN

- The information contained herein is subject to change without notice.
- TOSHIBA is continually working to improve the quality and reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to comply with the standards of safety in making a safe design for the entire system, and to avoid situations in which a malfunction or failure of such TOSHIBA products could cause loss of human life, bodily injury or damage to property.  
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