

### **Features**

- High surge power withstanding capabilities that absorb load dump surge.
- Low leakage current
- Low forward voltage drop
- Available in uni-directional polarity only
- RoHS compliant

## **Applications**

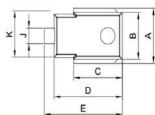
- Suitable to protect sensitive automotive circuit against surges and against load Dump surge
- Electronic system for use in automobile
- Electronic system for industrial use
- Electronic system for commercial use
- For communication, controls, measuring, instruments, etc.

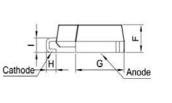
## ZENER DIODE SILICON DIFFUSED-JUNCTION TYPE





**RoHS** 



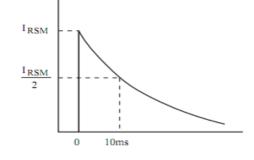


Dim.	mm			
A	9.5-10.5			
В	8.3-8.7			
С	9.7-10.3			
D	13.8-14.2			
Е	15.5-16.5			
F	4.8-5.0			
G	8.7-9.3			
Н	1.5-2.5			
Ι	2.5-3.0			
J	2.5-3.0			
K	7.7-7.9			

Package Outline Dimensions in Millimeters

#### MAXIMUM RATING (Ta=25℃)

PARAMETER	SYMBOL	RATING	UNIT
Allowable Power Dissipation (Note1)	Р	6	W
Peak pulse power dissipation with 10/1,000us waveform	Рррм	4,600	W
Peak pulse power dissipation with 10/10,000us waveform	Рррм	3,600	W
Non-Repetitive Peak Reverse Surge Current (See Fig.1 for the exponents.)	IRSM	90	Α
Operate Junction Temperature	Tj	-55~175	$^{\circ}$
Storage Temperature Range	Tstg	-55~175	$^{\circ}$



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

#### ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Breakdown Voltage	Vz	I <sub>Z</sub> =10mA	24	27	30	V
Operating Resistance	r <sub>d</sub>	I <sub>Z</sub> =10mA	-	-	30	Ω
Temperature Coefficient	$a_{\mathrm{T}}$	I <sub>Z</sub> =10mA	-	23	36	mV/°C
Forward Voltage Drop	V <sub>F</sub>	I⊧=6A	-	-	0.95	V
		I <sub>F</sub> =100A	-	-	1.10	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> =22V	-	-	10	μΑ
Clamping Voltage	Vc	IRSM=65A	-	-	40	V



#### RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted

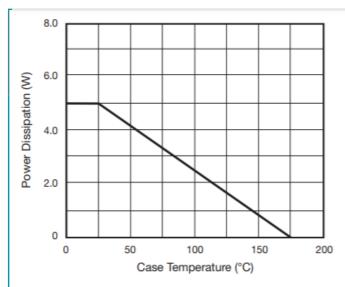


Fig. 1 - Power Derating Curve

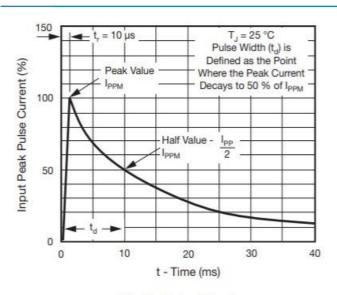


Fig. 3 - Pulse Waveform

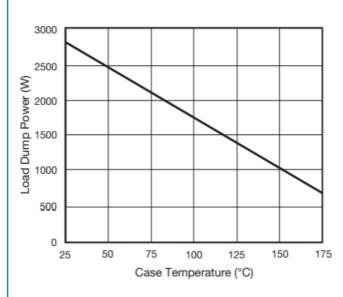


Fig. 2 - Load Dump Power Characteristics (10 ms Exponential Waveform)

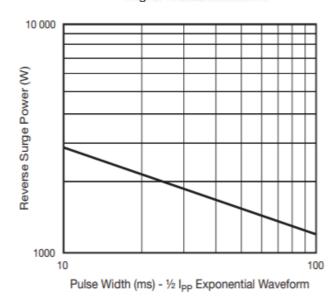
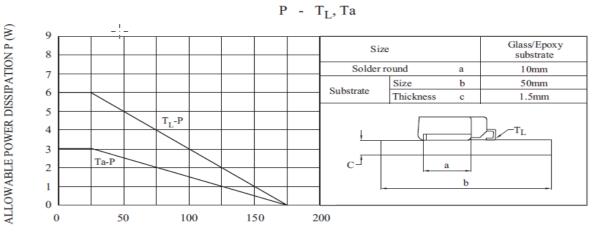


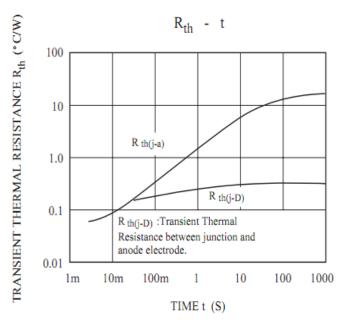
Fig. 4 - Reverse Power Capability

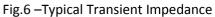


LEAD TEMPERATURE  $\mathbf{T_L}$  , AMBIENT TEMPERATURE Ta ( °C)

# Rating and Characteristic Curves SM6I22







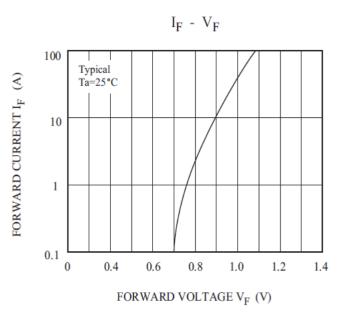


Fig. 7-Typical Forward Voltage