

# GSDZSMAZXX Series

## Zener Diodes

### Product Description

Zener Diodes 1.0W

### Features

- Reverse Voltage 5.1 to 39V
- Glass/Oxide passivated chip
- Low leakage
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- For use in stabilizing and clipping circuits with high power ra

### Mechanical Data

- Case : Molded plastic DO-214(SMA)
- Epoxy : UL 94V-0 rate flame retardant
- Lead : Solderable per MIL-STD-750, method 2026
- Polarity : Color band denotes cathode end
- Mounting position : Any

### Packages



SMA

### Ordering Information



Part Number	Package	Quantity
GSDZSMAZXXF	SMA	3,000 PCS

## Absolute Maximum Ratings

(T<sub>amb</sub>=25°C Unless Otherwise Noted)

Symbol	Conditions	Value	Unit
P <sub>D</sub>	Power Dissipation at TL=50°C <sup>(1)</sup>	1	W
V <sub>F</sub>	Maximum Forward Voltage at I <sub>F</sub> =200mA	1.2	V
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient air <sup>(2)</sup> .	170	°C/W
T <sub>J</sub>	Operating Temperature Range	-55 to +175	°C
T <sub>STG</sub>	Storage Temperature Range	-55 to +175	°C

**Note:**

(1) TL = Lead temperature at 3/8 " (9.5mm) from body

(2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case

## Electrical Characteristics

(T<sub>amb</sub>=25°C Unless Otherwise Noted)

Device Type	Marking Code	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
		V <sub>Z</sub> @ I <sub>ZT</sub>	I <sub>ZT</sub>	Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub> @ V <sub>R</sub>		I <sub>ZM</sub>
		V	mA	Ω	Ω	mA	μA	V	mA
GSDZSMAZ5V1	ZHK	5.1	100	5	500	1.0	2.5	1.0	196
GSDZSMAZ5V6	ZHL	5.6	100	2	250	2.0	5.0	2.0	179
GSDZSMAZ6V2	ZHN	6.2	100	2	200	2.0	5.0	3.0	161
GSDZSMAZ6V8	ZHO	6.8	100	2	200	1.0	5.0	4.0	147
GSDZSMAZ7V5	ZHQ	7.5	100	2	450	1.0	5.0	5.0	133
GSDZSMAZ8V2	ZHR	8.2	100	2	200	1.0	5.0	6.0	122
GSDZSMAZ9V1	ZHT	9.1	50	4	200	1.0	5.0	7.0	110
GSDZSMAZ10	ZHU	10	50	4	200	1.0	1.0	7.6	100
GSDZSMAZ12	ZHW	12	50	7	150	1.0	1.0	9.1	83
GSDZSMAZ15	ZHZ	15	50	10	150	1.0	1.0	11.4	67
GSDZSMAZ16	ZJA	16	25	15	150	1.0	0.5	12.2	63
GSDZSMAZ18	ZJF	18	25	15	150	1.0	0.5	13.7	56
GSDZSMAZ20	ZJG	20	25	15	180	1.0	0.5	15.2	50
GSDZSMAZ22	ZJK	22	25	15	180	1.0	0.5	16.7	45
GSDZSMAZ24	ZJL	24	25	15	180	1.0	0.5	18.2	42
GSDZSMAZ27	ZJN	27	25	15	200	1.0	0.5	20.5	37
GSDZSMAZ30	ZJQ	30	25	15	250	1.0	0.5	22.8	33
GSDZSMAZ33	ZJR	33	25	15	300	1.0	0.5	25.1	30
GSDZSMAZ36	ZJS	36	10	40	350	1.0	0.5	27.4	28
GSDZSMAZ39	ZJT	39	10	40	450	1.0	0.5	29.6	26

**Note:**

(1) The type number listed have a standard tolerance on the nominal zener voltage of ± 5 %

(2) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I<sub>ZT</sub> per JEDEC Method

## Typical Characteristics

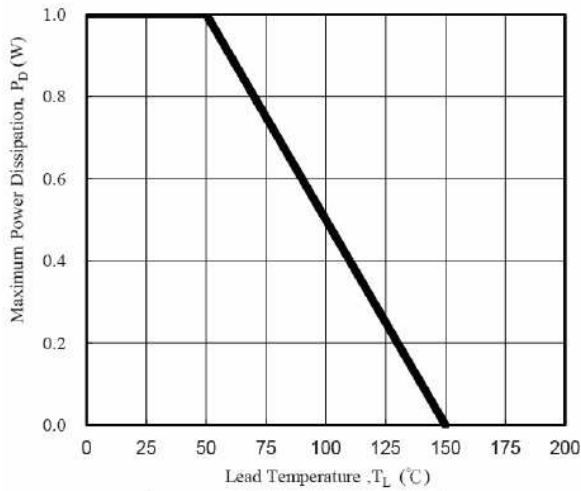


Fig. 1 - Power Temperature Derating Curve

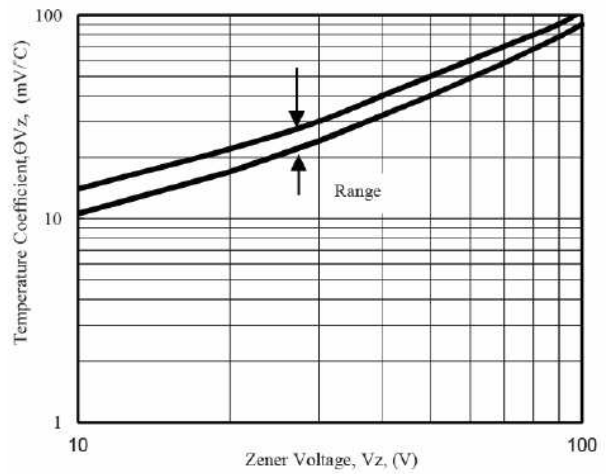


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

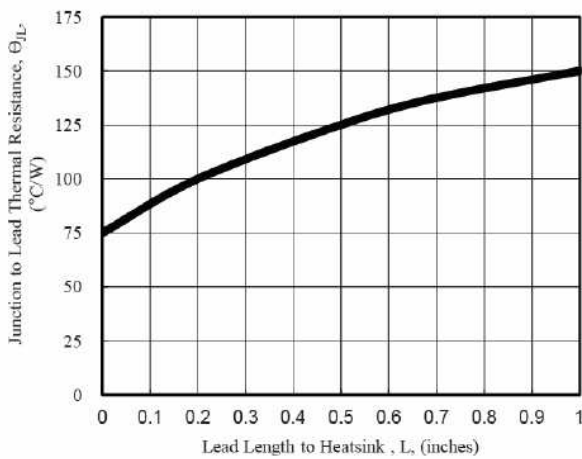


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

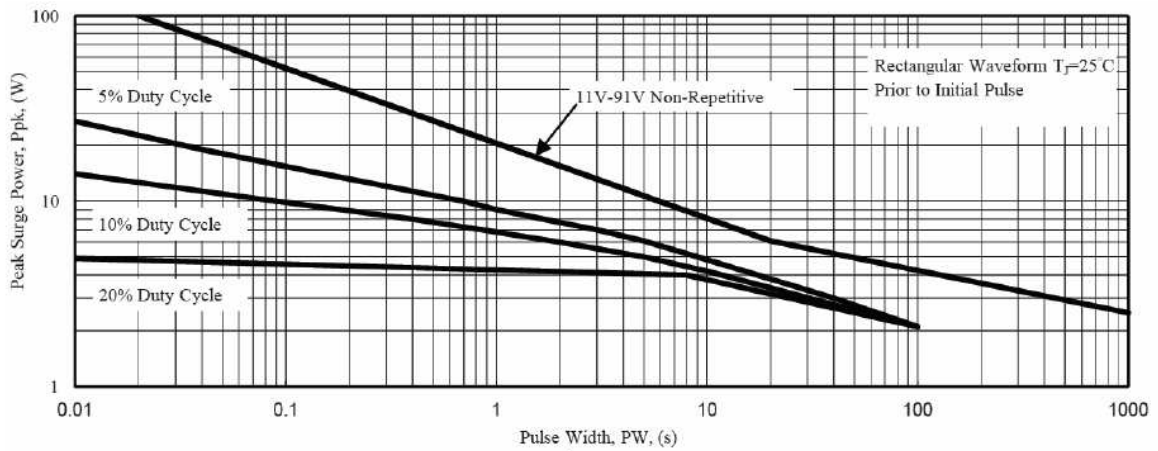
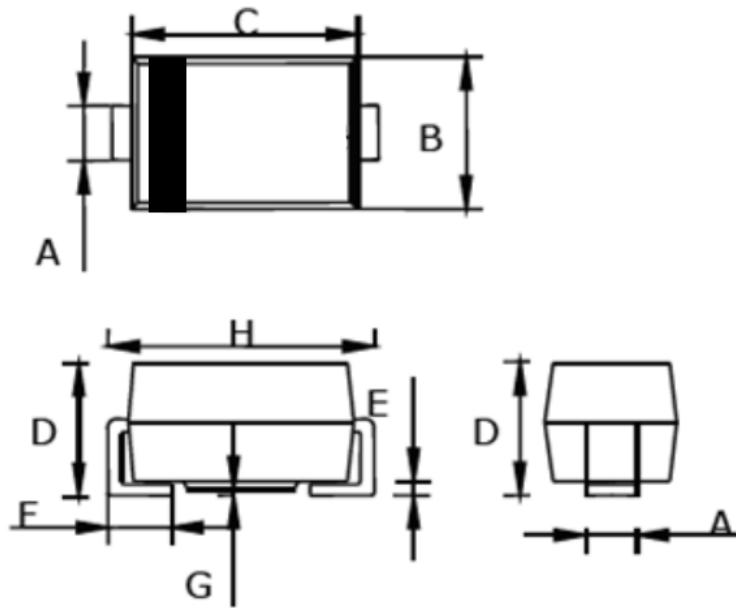


Fig. 4 - Maximum Surge Power

## Package Dimension

### SMA







### Dimensions



SYMBOL	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	1.35	1.80	0.053	0.071
B	2.50	2.90	0.098	0.114
C	3.90	5.10	0.154	0.201
D	1.90	2.45	0.075	0.096
E	0.05	0.203	0.002	0.008
F	0.76	1.52	0.030	0.060
G	-	0.203	-	0.008
H	4.80	5.30	0.189	0.209

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