

# Zener Diode Chips

# SZ1-SZ70 Series

## Features

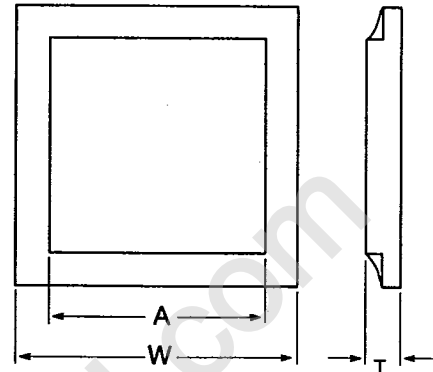
- Fully glass passivated/needs no encapsulation
- Power ratings from .75 to 35 watts
- Low leakage
- Metalized or solder coated

## Description

The SZ1 thru SZ70 series are diffused silicon, glass passivated zener diodes in chip form. These zeners, like all Sussex devices, can be supplied to JEDEC or custom specifications.

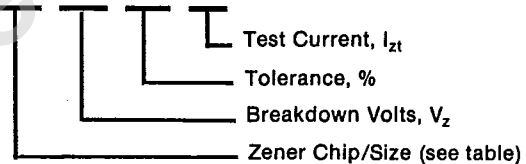
Applications for these zener die include voltage regulation, voltage reference, and transient voltage suppression. Unencapsulated die can be supplied in bulk or wafer packs, and are available with metalized surfaces for wire bonding or soldering applications.

All zener chips are 100% individually electrically tested to our or your specifications. Chips are visually inspected for all reject criteria in MIL-STD-883B, level B.



## Ordering Specifier

SZ3 - 12 - 10 - 1



## Maximum Ratings

PARAMETER	Symbol	SZ.75	SZ1	SZ1.5	SZ3	SZ16	SZ40	SZ70	UNITS
Power Dissipation	$P_{tot}$	.5	1	1.75	5	10	25	35	Watts
@ 80% $V_z$ Leakage at 175°C	$I_{RFM}$	50	50	100	300	500	1000	1250	u/Amps
Peak Surge Power	$I_{pp}$	30	70	90	500	700	1200	2200	Watts/1 ms
Operating Temp	$T_{op}$	-65 to 175	-65 to 175	-65 to 175	-65 to 175	-65 to 175	-65 to 175	-65 to 175	Degrees C
Junction Temp	$T_j$	175	175	175	175	175	175	175	Degrees C
Storage Temp	$T_{st}$	-65 to 190	-65 to 190	-65 to 190	-65 to 190	-65 to 190	-65 to 190	-65 to 190	Degrees C
Die Attach Temp	$T_d$	425	425	425	425	425	425	425	Degrees C/2 min
Dimension	W	.030	.040	.055	.085	.115	.220	.260	Inch
Dimension	A	.020	.028	.040	.065	.100	.205	.250	Inch
Dimension	T	.011	.011	.011	.011	.011	.011	.011	Inch

# SZ1-SZ70 Series

## Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless specified)

PARAMETER	Symbol	SZ.75	SZ1	SZ1.5	SZ3	SZ16	SZ40	SZ70	UNITS
@ 80% $V_z$ Leakage at 25°C	$I_{RFM}$	1	1	5	10	10	20	25	$\mu\text{Amps}$
Zener Volts, Min.	$V_z$	3	3	3	3	3	3	3	Volts, $t = 300\mu\text{s}$
Zener Volts, Max.	$V_z$	200	200	200	200	200	200	200	Volts, $t = 300\mu\text{s}$
Continuous Current	$I_{ZM}$	.06	.11	.20	.55	1.1	2.7	4	Amps at 10 v
Continuous Current	$I_{ZM}$	.004	.005	.009	.025	.05	.125	.175	Amps at 200 v
Test Current	$I_{zt}$	1	1	1	1	1	1	1	mA, Typ

