

# SMAZ5V1 - SMAZ39

# SURFACE MOUNT SILICON ZENER DIODES

**V<sub>Z</sub> : 5.1 - 39 Volts**

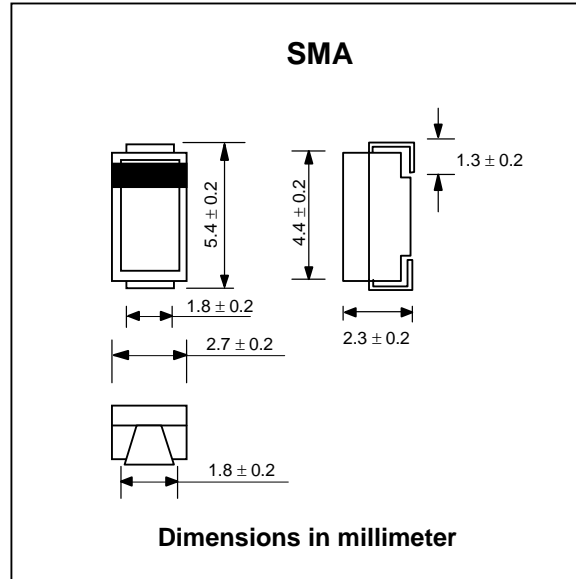
**P<sub>D</sub> : 1 Watt**

**FEATURES :**

- \* Complete Voltage Range 5.1 to 39 Volts
- \* High Surge Capability
- \* Ideally Suited for Automatic Assembly
- \* Standard V<sub>Z</sub> Tolerance is ± 5%
- \* Pb / RoHS Free

**MECHANICAL DATA :**

- \* Case : SMA Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.060 gram (Approximately)



**MAXIMUM RATINGS**

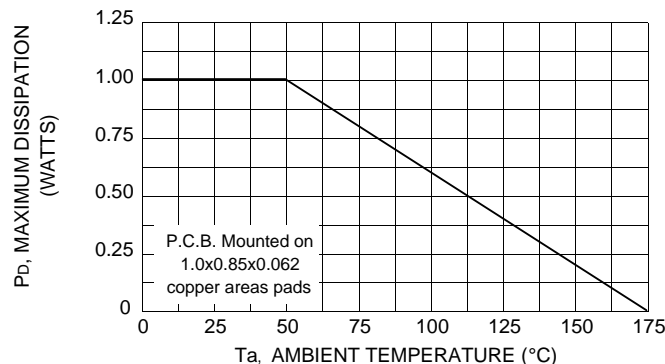
Rating at 25°C ambient temperature unless otherwise specified

Rating	Symbol	Value	Unit
DC Power Dissipation at T <sub>a</sub> = 50 °C (Note1)	P <sub>D</sub>	1.0	W
Maximum Forward Voltage at I <sub>F</sub> = 200 mA	V <sub>F</sub>	1.2	V
Temperature Resistance Junction to Ambient (Note 1)	R <sub>θJA</sub>	125	°C
Junction and Storage Temperature Range	T <sub>STG</sub>	- 65 to + 150	°C

**Note :**

(1) P.C.B. Mounted on 1.0" x 0.85" x 0.062" copper areas pads.

**Fig. 1 MAXIMUM CONTINUOUS POWER DERATING**



## ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

Type Number	Zener Voltage <sup>(2)</sup> V <sub>Z</sub> @ I <sub>ZT</sub>				Maximum Zener Impedance			Maximum Reverse Leakage Current, I <sub>R</sub>		Maximum DC Zener Current <sup>(1)</sup> I <sub>ZM</sub> (mA)
	Nom	Min	Max	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>		
	(V)	(V)	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA) (V)		
SMAZ5V1	5.1	4.84	5.40	100	5.0	500	1.0	2.5	1.0	196
SMAZ5V6	5.6	5.32	5.88	100	2.0	250	2.0	5.0	2.0	179
SMAZ6V2	6.2	5.89	6.51	100	2.0	200	2.0	5.0	3.0	161
SMAZ6V8	6.8	6.46	7.14	100	2.0	200	1.0	5.0	4.0	147
SMAZ7V5	7.5	7.13	7.88	100	2.0	450	1.0	5.0	5.0	133
SMAZ8V2	8.2	7.79	8.61	100	2.0	200	1.0	5.0	6.0	122
SMAZ9V1	9.1	8.65	9.56	50	4.0	200	1.0	5.0	7.0	10
SMAZ10	10.0	9.50	10.50	50	4.0	200	1.0	1.0	7.6	100
SMAZ12	12.0	11.40	12.60	50	7.0	150	1.0	1.0	9.1	83
SMAZ15	15.0	14.25	15.75	50	10	150	1.0	1.0	11.4	67
SMAZ16	16.0	15.20	16.80	25	15	150	1.0	0.5	12.2	63
SMAZ18	18.0	17.10	18.90	25	15	150	1.0	0.5	13.7	56
SMAZ20	20.0	19.00	21.00	25	15	180	1.0	0.5	15.2	50
SMAZ22	22.0	20.90	23.10	25	15	180	1.0	0.5	16.7	45
SMAZ24	24.0	22.80	25.20	25	15	180	1.0	0.5	18.2	42
SMAZ27	27.0	25.65	28.35	25	15	200	1.0	0.5	20.5	37
SMAZ30	30.0	28.50	31.50	25	15	250	1.0	0.5	22.8	33
SMAZ33	33.0	31.35	34.65	25	15	300	1.0	0.5	25.1	30
SMAZ36	36.0	34.20	37.80	10	40	350	1.0	0.5	27.4	28
SMAZ39	39.0	37.05	40.95	10	40	450	1.0	0.5	29.6	26

### Notes :

- (1) P.C.B. Mounted on 1.0" x 0.85" x 0.062" copper areas pads.
- (2) Short duration test pulse used to minimize self-heating effect.
- (3) "SMA" will be omitted in marking on the diode.