

**SURFACE MOUNT ZENER DIODE**

STAND-OFF VOLTAGE - **5.1 to 39** Volts  
POWER DISSIPATION - **1.0** WATTS

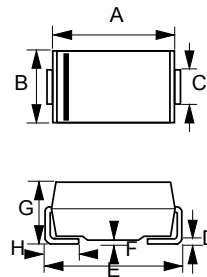
**FEATURES**

- 1.0 W Power Dissipation
- 5.1V~39V Nnmlinal Zener Voltage Range
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has UL flammability classification 94V-O
- Standard Vz Tolerance is +-5%
- ESD Capability:  
Machine model : JESD22-A115 class C.  
Human body model : JESD22-A114 class 3B.

**MECHANICAL DATA**

- Case : Molded plastic
- Polarity : Cathode band
- Weight : 0.002 ounces, 0.064 gram

**SMA**



SMA		
DIM.	MIN.	MAX.
A	4.06	4.57
B	2.29	2.92
C	1.27	1.63
D	0.15	0.31
E	4.83	5.59
F	0.05	0.20
G	2.01	2.40
H	0.76	1.52
All Dimensions in millimeter		

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOLS	VALUE	UNIT
Zener Current (see page3)	I <sub>ZM</sub>	P <sub>d</sub> / V <sub>z</sub>	mA
Forward Voltage @ I <sub>F</sub> = 200 mA	V <sub>F</sub>	1.2	Volts
Max. Steady State Power Dissipation @T <sub>L</sub> =100°C , Lead Length= 1mm	P <sub>d</sub>	1.0	W
Typical Thermal Resistnace (Note1)	R <sub>thjL</sub> R <sub>thja</sub>	20 80	°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

NOTE : 1. Thermal Resistance Junction to Lead/ Ambient.

REV. 4, Oct-2010, KSJA01

FIG.1 - MAXIMUM CONTINUOUS POWER DISSIPATION

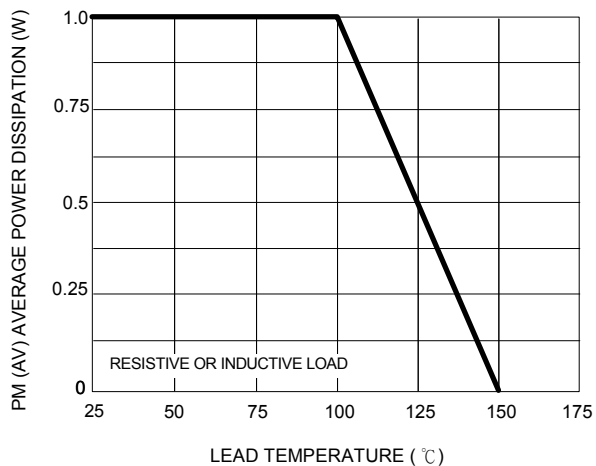


FIG.2 - TYPICAL ZENER IMPEDANCE

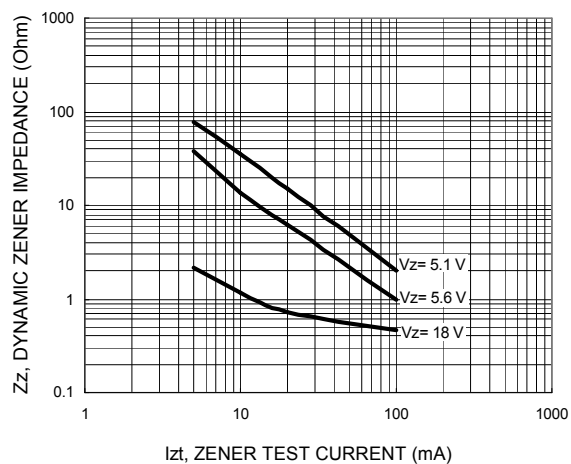


FIG.3 - TYPICAL TEMPERATURE COEFFICIENTS

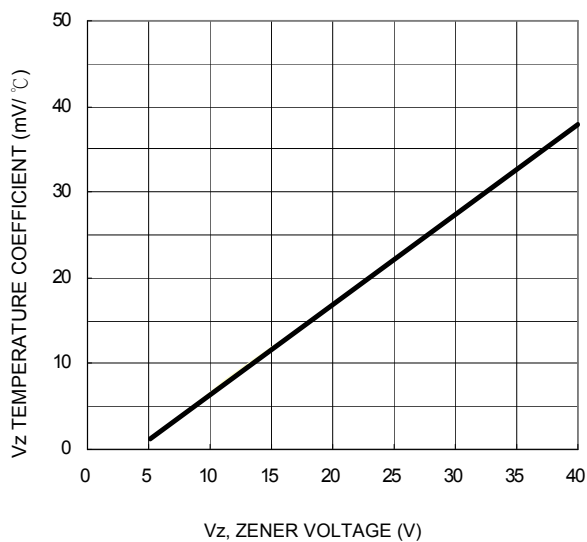
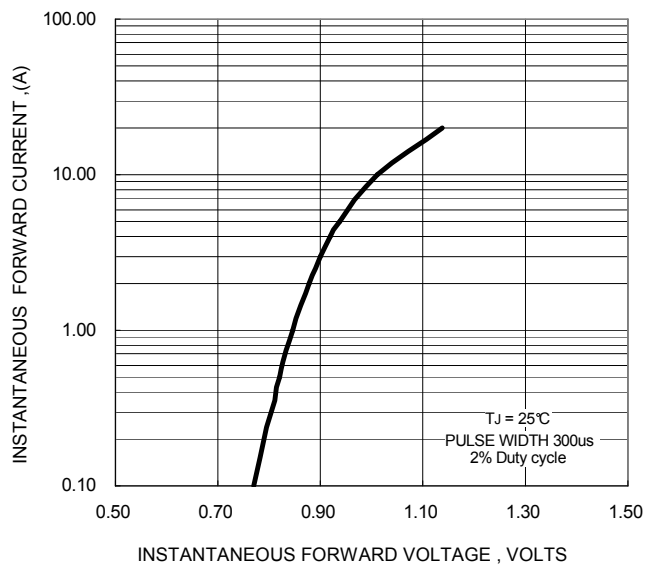


FIG.4 - TYPICAL FORWARD CHARACTERISTICS



**Electrical Characteristics @T<sub>A</sub> = 25°C unless otherwise noted**

Type Number	Marking Code	Zener Voltage Range (Note 2)			Test Current	Maximum Zener Impedance			Maximum Reverse Current		I <sub>zM</sub> Max (Note 1)
		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>R</sub> @ V <sub>R</sub>		
		Nom (V)	Min (V)	Max (V)	mA	Ω	Ω	mA	μA	V	mA
SMAZ5V1	ZHK	5.1	4.84	5.4	100	5	500	1	2.5	1	196
SMAZ5V6	ZHL	5.6	5.32	5.88	100	2	250	2	5	2	179
SMAZ6V2	ZHN	6.2	5.89	6.51	100	2	200	2	5	3	161
SMAZ6V8	ZHO	6.8	6.46	7.14	100	2	200	1	5	4	147
SMAZ7V5	ZHQ	7.5	7.13	7.88	100	2	450	1	5	5	133
SMAZ8V2	ZHR	8.2	7.79	8.61	100	2	200	1	5	6	122
SMAZ9V1	ZHT	9.1	8.65	9.56	50	4	200	1	5	7	110
SMAZ10	ZHU	10	9.5	10.5	50	4	200	1	1	7.6	100
SMAZ12	ZHW	12	11.4	12.6	50	7	150	1	1	9.1	83
SMAZ15	ZHZ	15	14.25	15.75	50	10	150	1	1	11.4	67
SMAZ16	ZJA	16	15.2	16.8	25	15	150	1	0.5	12.2	63
SMAZ18	ZJF	18	17.1	18.9	25	15	150	1	0.5	13.7	56
SMAZ20	ZJG	20	19	21	25	15	180	1	0.5	15.2	50
SMAZ22	ZJK	22	20.9	23.1	25	15	180	1	0.5	16.7	45
SMAZ24	ZJL	24	22.8	25.2	25	15	180	1	0.5	18.2	42
SMAZ27	ZJN	27	25.65	28.35	25	15	200	1	0.5	20.5	37
SMAZ30	ZJQ	30	28.5	31.5	25	15	250	1	0.5	22.8	33
SMAZ33	ZJR	33	31.35	34.65	25	15	300	1	0.5	25.1	30
SMAZ36	ZJS	36	34.2	37.8	10	40	350	1	0.5	27.4	28
SMAZ39	ZJT	39	37.05	40.95	10	40	450	1	0.5	29.6	26

**Note 1**

The actual I<sub>zm</sub> for any device may not exceed the value of 1 watts divided by the actual V<sub>Z</sub> of the device. T<sub>L</sub>=120°C at 1mm maximum from the device body.

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