

**SURFACE MOUNT ZENER DIODE**

STAND-OFF VOLTAGE - **27 to 39** Volts  
POWER DISSIPATION - **5.0** WATTS

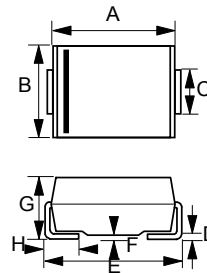
**FEATURES**

- 5.0 W Power Dissipation
- 27V~39V Nnimal Zener Voltage Range
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has UL flammability classification 94V-O
- Standard Vz Tolerance is +-5%

**MECHANICAL DATA**

- Case : Molded plastic
- Polarity : Cathode band
- Weight : 0.003 ounces, 0.093 gram

**SMB**



SMB		
DIM.	MIN.	MAX.
A	4.06	4.57
B	3.30	3.94
C	1.96	2.21
D	0.15	0.31
E	5.21	5.59
F	0.05	0.20
G	2.01	2.62
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 .	P <sub>d</sub>	5.0	W
Typical Thermal Resistnace (Note1)	R <sub>thjL</sub> R <sub>thja</sub>	8.0 15	°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.

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FIG.1 - MAXIMUM CONTINUOUS POWER DISSIPATION

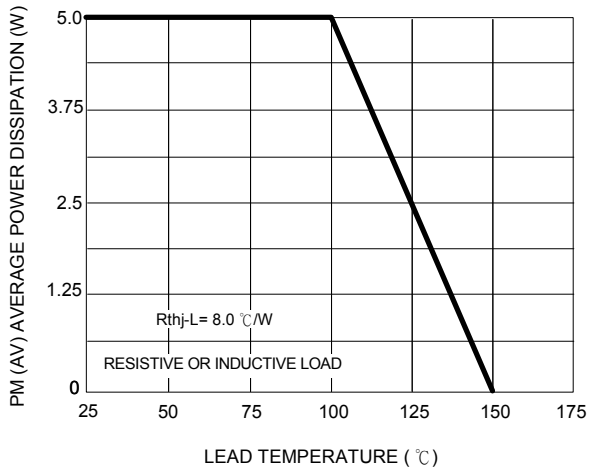


FIG.2 - TYPICAL ZENER IMPEDANCE

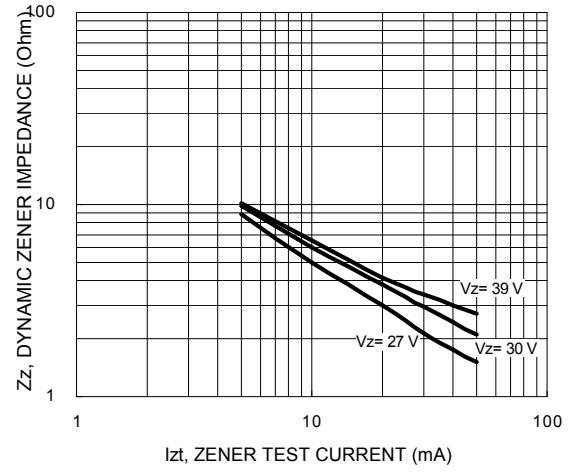


FIG.3 - TYPICAL TEMPERATURE COEFFICIENTS

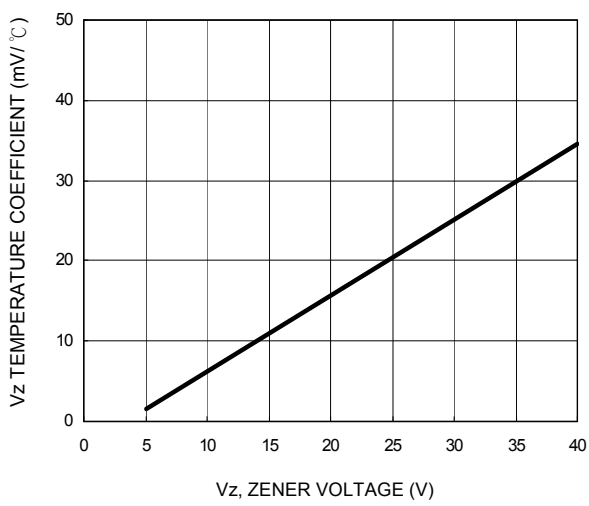


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

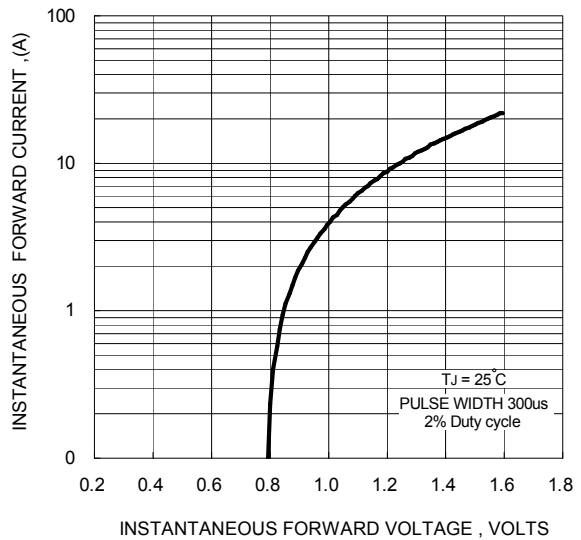
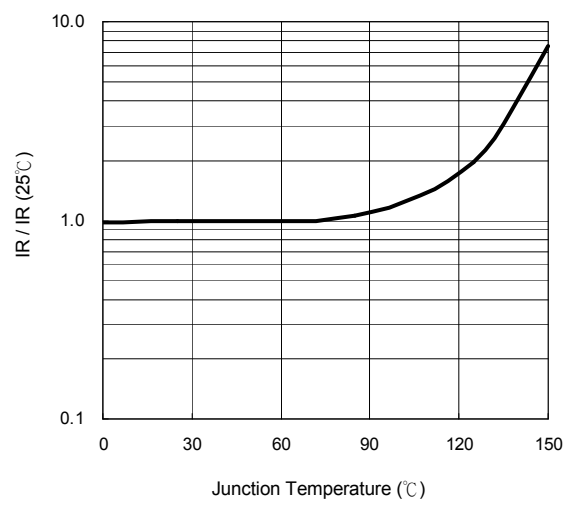


FIG.5 - Reverse Leakage Current versus TJ



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

Type Number	Marking Code	Zener Voltage Range (Note 1)			Test Current	Maximum Zener Impedance			Maximum Reverse Current		I <sub>zm</sub> Max (Note 2)
		V <sub>z</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
SMBZ27	ZMG	27	25.65	28.35	50	5.0	120	1	0.5	20.6	176
SMBZ30	ZMK	30	28.5	31.5	40	8.0	140	1	0.5	22.8	158
SMBZ33	ZMM	33	31.35	34.65	40	10.0	150	1	0.5	25.1	144
SMBZ36	ZMP	36	34.2	37.8	30	11.0	160	1	0.5	27.4	132
SMBZ39	ZMR	39	37.05	40.95	30	14.0	170	1	0.5	29.7	122

**Note:**

- 1) Device listed above have +-5% tolerance
- 2) The actual I<sub>zm</sub> for any device may not exceed the value of 5 watts divided by the actual V<sub>z</sub> of the device. T<sub>L</sub>=100°C at 1mm maximum from the device body.

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