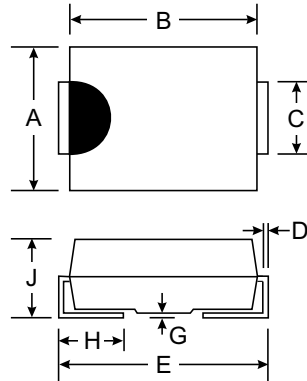


### Features

- 1.0W Power Dissipation
- High Surge Capability
- Ideally Suited for Automatic Assembly
- 3.3V - 39V Nominal Zener Voltage Range
- Standard  $V_Z$  Tolerance is  $\pm 5\%$
- Plastic Material: UL Flammability Classification Rating 94V-0

### Mechanical Data

- Case: SMA, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Marking: Marking Code (See Table on Page 2)
- Polarity: Cathode Notch or Cathode Band
- Weight: 0.064 grams (approx.)



SMA		
Dim	Min	Max
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.10	0.20
H	0.76	1.52
J	2.01	2.62
All Dimensions in mm		

### Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Zener Current (see Table page 2)	$I_{ZM}$	$P_d / V_Z$	mA
Forward Voltage @ $I_F = 200\text{mA}$	$V_F$	1.2	V
Power Dissipation Derate Above $50^\circ\text{C}$ (Note 1) @ $T_A = 50^\circ\text{C}$	$P_d$	1.0 8.0	W mW/ $^\circ\text{C}$
Typical Thermal Resistance - Junction to Terminal (Note 1)	$R_{\theta JT}$	30	$^\circ\text{C/W}$
Typical Thermal Resistance - Junction to Ambient (Note 1)	$R_{\theta JA}$	120	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +175	$^\circ\text{C}$

- Notes:
1. Valid provided that terminals are kept at ambient temperature.
  2. Tested with  $I_{ZT}$  current pulses. Pulse width  $\leq 50\text{ms}$ .

**Electrical Characteristics** @<sub>T<sub>A</sub></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
SMAZ3V3	ZGW	3.3	3.13	3.46	100	10	500	1.0	100	1.0	303
SMAZ3V6	ZGZ	3.6	3.42	3.78	100	9.0	500	1.0	100	1.0	278
SMAZ3V9	ZHA	3.9	3.70	4.09	100	7.5	500	1.0	50	1.0	256
SMAZ4V3	ZHF	4.3	4.08	4.51	100	6.0	500	1.0	10	1.0	233
SMAZ4V7	ZHG	4.7	4.46	4.93	100	5.0	500	1.0	5.0	1.0	213
SMAZ5V1	ZHK	5.1	4.84	5.40	100	5.0	500	1.0	2.5	1.0	196
SMAZ5V6	ZHL	5.60	5.32	5.88	100	2.0	250	2.0	5.0	2.0	179
SMAZ6V2	ZHN	6.20	5.89	6.51	100	2.0	200	2.0	5.0	3.0	161
SMAZ6V8	ZHO	6.80	6.46	7.14	100	2.0	200	1.0	5.0	4.0	147
SMAZ7V5	ZHQ	7.50	7.13	7.88	100	2.0	450	1.0	5.0	5.0	133
SMAZ8V2	ZHR	8.20	7.79	8.61	100	2.0	200	1.0	5.0	6.0	122
SMAZ9V1	ZHT	9.10	8.65	9.56	50	4.0	200	1.0	5.0	7.0	110
SMAZ10	ZHU	10.00	9.50	10.50	50	4.0	200	1.0	1.0	7.6	100
SMAZ12	ZHW	12.00	11.40	12.60	50	7.0	150	1.0	1.0	9.1	83
SMAZ15	ZHZ	15.00	14.25	15.75	50	10	150	1.0	1.0	11.4	67
SMAZ16	ZJA	16.00	15.20	16.80	25	15	150	1.0	0.5	12.2	63
SMAZ18	ZJF	18.00	17.10	18.90	25	15	150	1.0	0.5	13.7	56
SMAZ20	ZJG	20.00	19.00	21.00	25	15	180	1.0	0.5	15.2	50
SMAZ22	ZJK	22.00	20.90	23.10	25	15	180	1.0	0.5	16.7	45
SMAZ24	ZJL	24.00	22.80	25.20	25	15	180	1.0	0.5	18.2	42
SMAZ27	ZJN	27.00	25.65	28.35	25	15	200	1.0	0.5	20.5	37
SMAZ30	ZJQ	30.00	28.50	31.50	25	15	250	1.0	0.5	22.8	33
SMAZ33	ZJR	33.00	31.35	34.65	25	15	300	1.0	0.5	25.1	30
SMAZ36	ZJS	36.00	34.20	37.80	10	40	350	1.0	0.5	27.4	28
SMAZ39	ZJT	39.00	37.05	40.95	10	40	450	1.0	0.5	29.6	26

- Notes: 1. Valid provided that device terminals are kept at ambient temperature.  
2. Tested with I<sub>ZT</sub> current pulses. Pulse width ≤ 50ms.

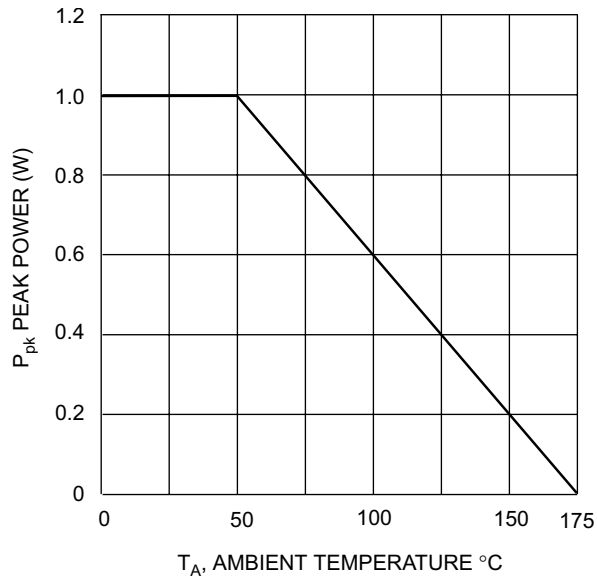


Fig. 1 Power Dissipation vs Ambient Temperature

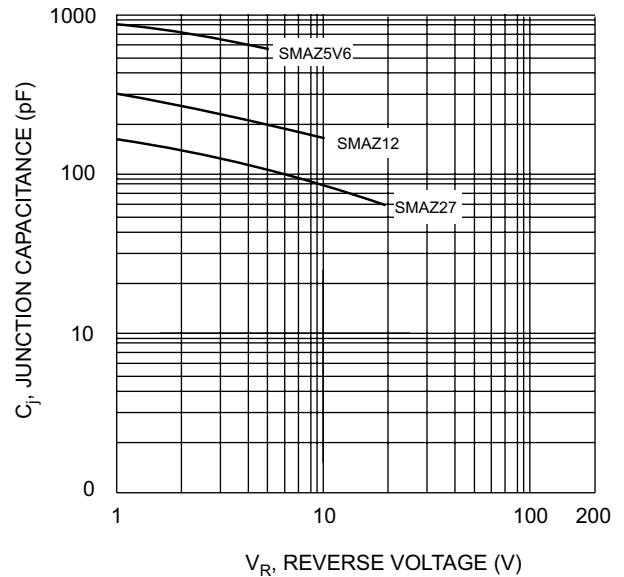


Fig. 2 Junction Capacitance vs Reverse Voltage

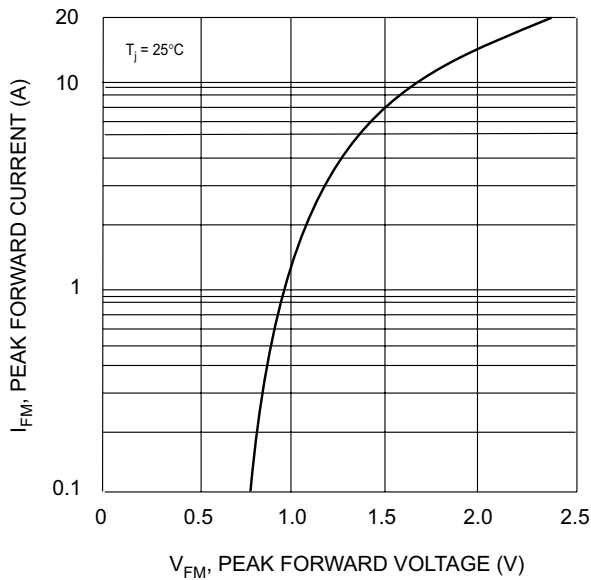


Fig. 3 Peak Forward Current vs Peak Forward Voltage

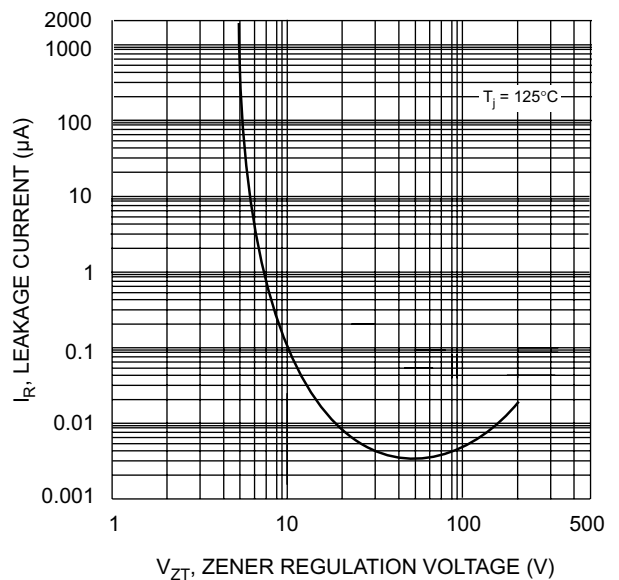


Fig. 4 Leakage Current vs Regulation Voltage

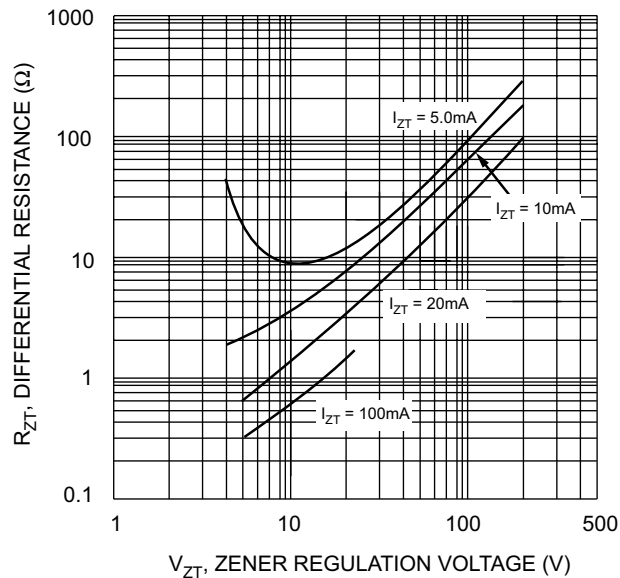


Fig. 5 Differential Resistance vs Regulation Voltage