



SMAZ5V1 - SMAZ200

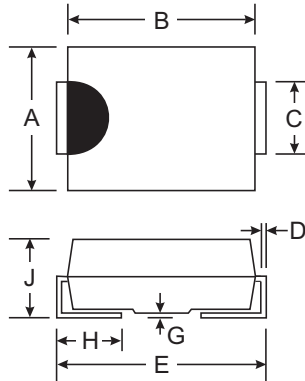
1.0 W SURFACE MOUNT ZENER DIODE

Features

- 2.0W Power Dissipation on Infinite Heat Sink
- High Surge Capability
- Ideally Suited for Automatic Assembly
- 5.1V - 200V Nominal Zener Voltage Range
- Standard V_Z Tolerance is 6%
- Plastic Material - UL Flammability Classification 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
- Approx. Weight: 0.064 grams
- Mounting Position: Any



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_Z	P_d / V_Z	mA
Power Dissipation Derate Above 50°C (Note 1)	P_d	1.0 8.0	W mW/ $^\circ\text{C}$
Typical Thermal Resistance - Junction to Lead (Note 1)	$R_{\theta JL}$	30	K/W
Typical Thermal Resistance - Junction to Ambient (Note 1)	$R_{\theta JA}$	120	K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +175	$^\circ\text{C}$

- Notes:
1. Device on fiberglass substrate.
 2. Tested with I_{ZT} current pulses. Pulse width $\leq 50\text{ms}$.
 3. Device on Infinite Heat Sink.

Electrical Characteristics

@T_A = 25°C unless otherwise noted

Type Number	Marking Code	Zener Voltage Range (Note 2)		Test Current	Maximum Zener Impedance			Typical Temperature Coefficient	Maximum Reverse Leakage Current		I _{ZSM} Max	
		V _Z @ I _{ZT}			I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}		ΔV _Z	I _R @ V _R		@25°C (Note 1)
		Volts	Volts	mA	Ohms	Ohms	mA	%/K	μA	Volts	A	mA
SMAZ5V1	ZHK	4.8	5.4	100	5.0	350	2.0	0.010	5.0	1.0	7.8	370
SMAZ5V6	ZHL	5.2	6.0	100	2.0	250	2.0	0.025	5.0	1.0	7.1	330
SMAZ6V2	ZHN	5.8	6.6	100	2.0	200	2.0	0.032	5.0	1.0	6.4	300
SMAZ6V8	ZHO	6.4	7.21	100	2.0	200	1.0	0.040	5.0	1.0	5.9	275
SMAZ7V5	ZHQ	7.0	7.9	100	2.0	450	1.0	0.045	5.0	2.0	5.4	250
SMAZ8V2	ZHR	7.7	8.7	100	2.0	200	1.0	0.048	5.0	3.5	4.9	220
SMAZ9V1	ZHT	8.5	9.6	50	4.0	200	1.0	0.051	5.0	3.5	4.4	205
SMAZ10	ZHU	9.4	10.6	50	4.0	200	1.0	0.060	1.0	8.3	3.6	170
SMAZ12	ZHW	11.4	12.7	50	7.0	150	1.0	0.065	1.0	9.1	3.3	155
SMAZ15	ZHZ	13.8	15.6	50	10	150	1.0	0.070	1.0	11.4	2.7	130
SMAZ16	ZJA	15.3	17.1	25	15	150	1.0	0.070	0.5	12.2	2.5	115
SMAZ18	ZJF	16.8	19.1	25	15	150	1.0	0.075	0.5	13.7	2.2	105
SMAZ20	ZJG	18.8	21.2	25	15	180	1.0	0.075	0.5	15.2	2.0	94
SMAZ22	ZJK	20.8	23.3	25	15	180	1.0	0.080	0.5	16.7	1.8	86
SMAZ24	ZJL	22.8	25.6	25	15	180	1.0	0.080	0.5	18.2	1.6	78
SMAZ27	ZJN	25.1	28.9	25	15	200	1.0	0.085	0.5	20.5	1.4	69
SMAZ30	ZJQ	28	32	25	15	250	1.0	0.085	0.5	22.8	1.1	62
SMAZ33	ZJR	31	35	25	15	300	1.0	0.085	0.5	25.1	1.0	56
SMAZ36	ZJS	34	38	10	40	350	1.0	0.085	0.5	27.4	0.9	52
SMAZ39	ZJT	37	41	10	40	450	1.0	0.090	0.5	29.6	1.0	48
SMAZ47	ZJV	44	50	10	45	600	1.0	0.090	0.5	35.7	0.7	40
SMAZ68	ZKM	64	72	10	80	1000	1.0	0.090	0.5	47.1	0.064	30
SMAZ100	ZKQ	94	106	5.0	200	2000	1.0	0.090	0.5	75	0.40	18
SMAZ150	ZKR	138	156	5.0	300	4000	0.5	0.095	0.5	114	0.15	12.8
SMAZ200	ZKW	188	212	5.0	350	6000	0.5	0.095	0.5	152	0.12	9.4

- Notes:
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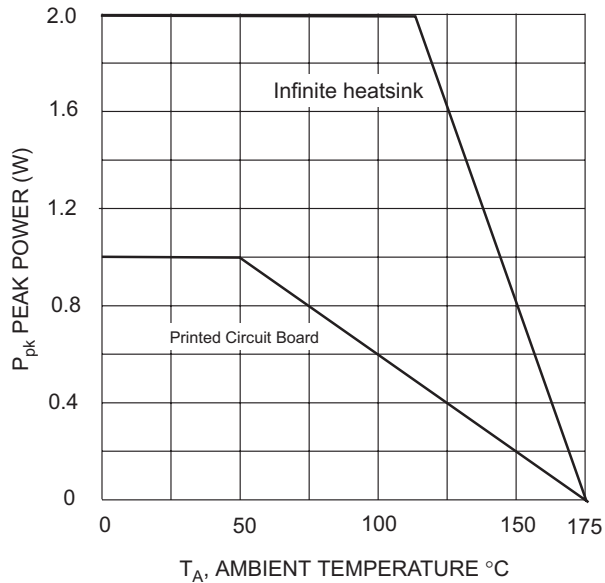


Fig. 1 Power Dissipation vs Ambient Temperature

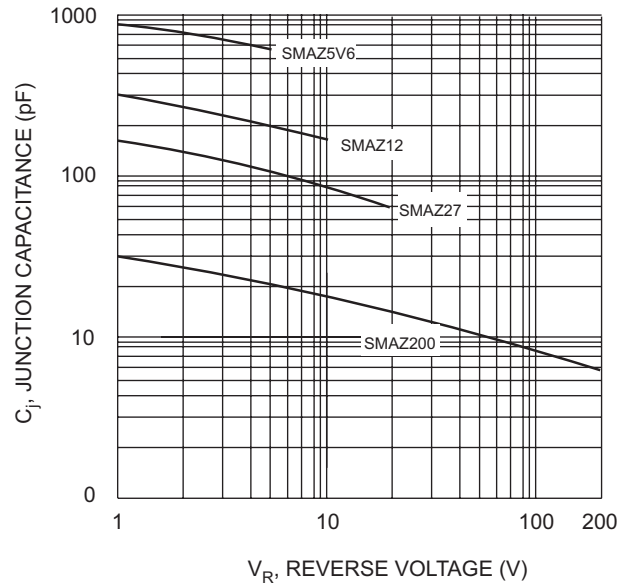


Fig. 2 Junction Capacitance vs Reverse Voltage

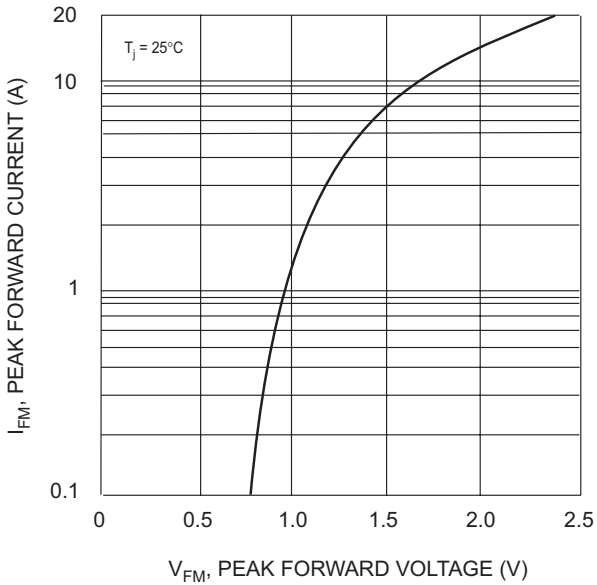


Fig. 3 Peak Forward Current vs Peak Forward Voltage

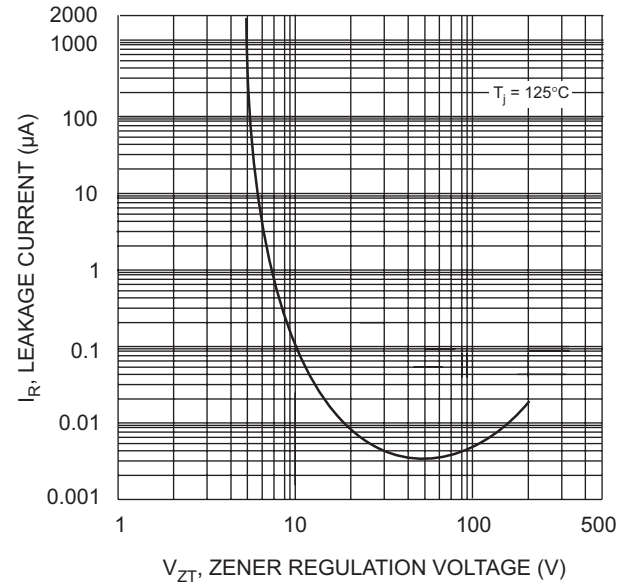


Fig. 4 Leakage Current vs Regulation Voltage

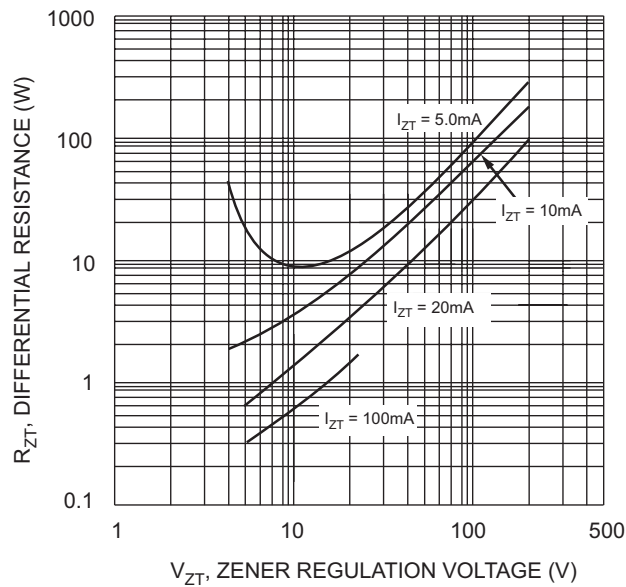


Fig. 5 Differential Resistance vs Regulation Voltage