

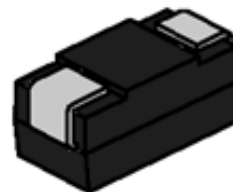


Zener Diodes: SMAZHC Series

Rev.1.2

FEATURE

- ✧ Silicon power zener diodes.
- ✧ Low zener impedance.
- ✧ 1000mW rating on FR-4 or FR-5 board.
- ✧ Voltage range includes breakdown voltages from 4.7V to 6.2V with $\pm 5\%$ for SMAZHC series.
- ✧ Low profile surface-mount package.
- ✧ Zener and surge current specification
- ✧ For use in stabilizing and clamping circuits with high power rating.
- ✧ Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C.



SMA



Uni-directional

Symbol

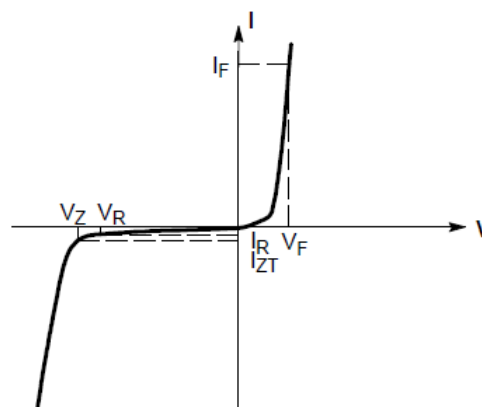
ABSOLUTE MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

Parameter	Symbol	Max Value	Unit
Total power dissipation @75°C	P_D	1000	mW
Thermal resistance junction to ambient (Note1)	$R_{\theta JA}$	120	°C/W
Junction temperature	T_J	150	°C
Storage temperature range	T_S	-55 to+150	°C
Operating temperature range	T_{op}	-55 to+150	°C

Notes1: Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch

ELECTRICAL CHARACTERISTICS($T_A=25^\circ\text{C}$)

Symbol	Parameter
V_Z	Reverse zener voltage at I_{zt}
I_{zt}	Reverse current
I_R	Reverse leakage current at V_R
V_R	Reverse voltage
I_F	Forward current
V_F	Forward voltage at I_F



Zener voltage regulator

MARKING



7R1: Device Marking Code
2009: the ninth week, 2020

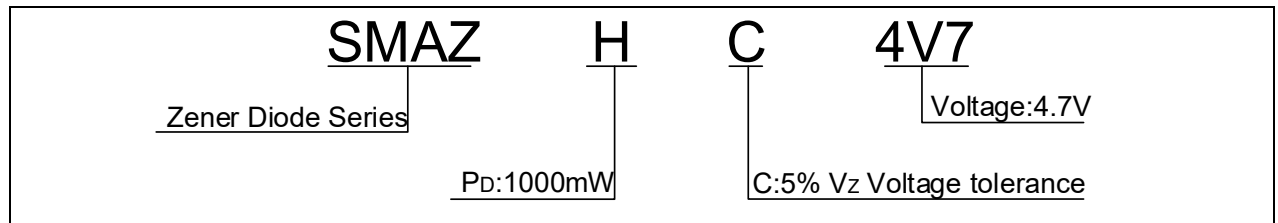
SMAZHC ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}C$ unless otherwise noted)

Maximum $V_F=1.2V$ at $I_F=200mA$

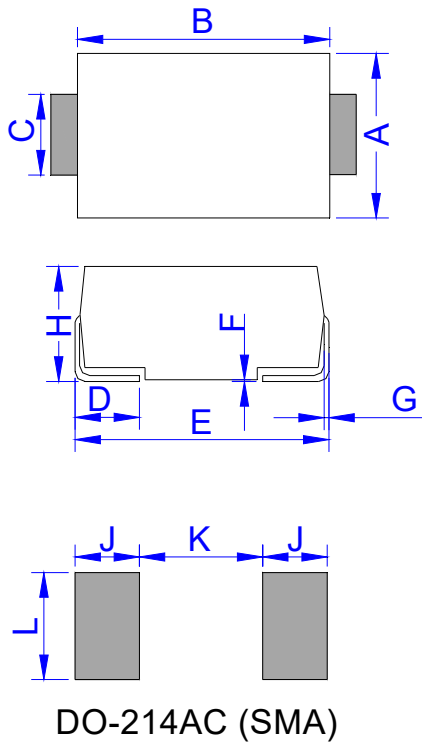
Type number	Zener voltage range at I_{zt}				Maximum zener impedance			Maximum reverse leakage current		Marking code
	Nom (Volts)	Min (Volts)	Max (Volts)	I_{zt} (mA)	Z_{ZT} (Ω)	Z_{ZK} (Ω)	I_{ZK} (mA)	I_R (μA)	V_R (Volts)	
SMAZHC4V7	4.7	4.47	4.94	53	8	600	1.0	10	1	7R1
SMAZHC5V1	5.1	4.85	5.36	49	7	500	1.0	5	1	7T1
SMAZHC5V6	5.6	5.32	5.88	45	5	500	1.0	5	2	7U1
SMAZHC6V2	6.2	5.89	6.51	41	4	500	1.0	5	3	7V1

Notes: Junction capacitance is measured in $V_R=0V$, $f=1MHz$.

ORDERING INFORMATION

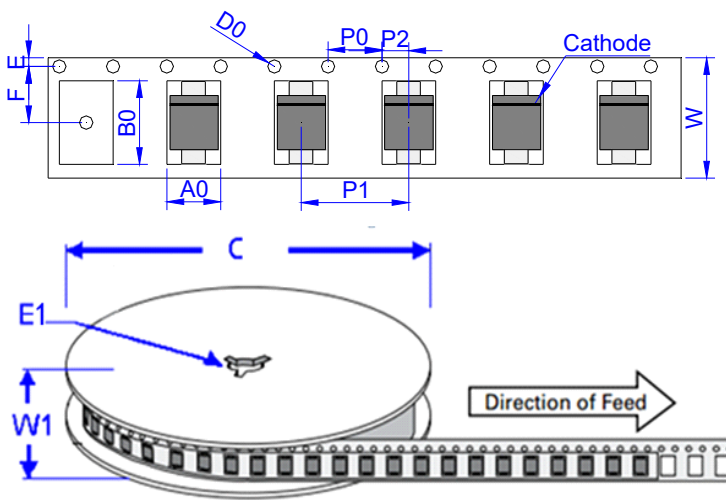


PACKAGE MECHANICAL DATA



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.60	3.00	0.102	0.118
B	4.15	4.65	0.163	0.183
C	1.25	1.65	0.049	0.065
D	0.95	1.52	0.037	0.060
E	4.90	5.30	0.193	0.209
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.00	2.44	0.079	0.096
J	2.00		0.079	
K		2.30		0.091
L	1.80		0.071	

TAPE AND REEL SPECIFICATION-SMA



Ref.	Dimensions	
	Millimeters	Inches
A0	2.79 ± 0.3	0.110 ± 0.012
B0	5.33 ± 0.3	0.210 ± 0.012
C	330.0	13.0
D0	1.55 ± 0.1	0.061 ± 0.004
E	1.75 ± 0.2	0.069 ± 0.008
E1	13.3 ± 0.3	0.524 ± 0.012
F	5.5 ± 0.2	0.217 ± 0.008
P0	4.00 ± 0.2	0.157 ± 0.008
P1	4.00 ± 0.2	0.157 ± 0.008
P2	2.00 ± 0.2	0.079 ± 0.008
W	12.0 ± 0.2	0.472 ± 0.008
W1	15.7 ± 2.0	0.618 ± 0.079

PART No.	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	DESCRIPTION
SMAZHC Series	0.066	7,500	120,000	13 inch reel pack

RATINGS AND CHARACTERISTICS CURVES ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

Fig.1 Power dissipation vs lead temperature

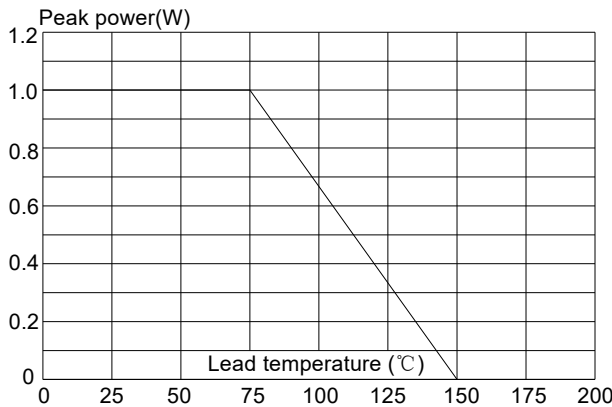
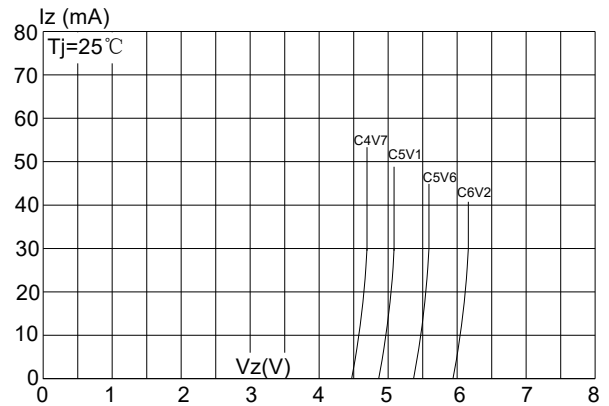


Fig.2 Zener breakdown characteristics




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