

SMAZ SERIES

1.0W SURFACE MOUNT ZENER DIODE

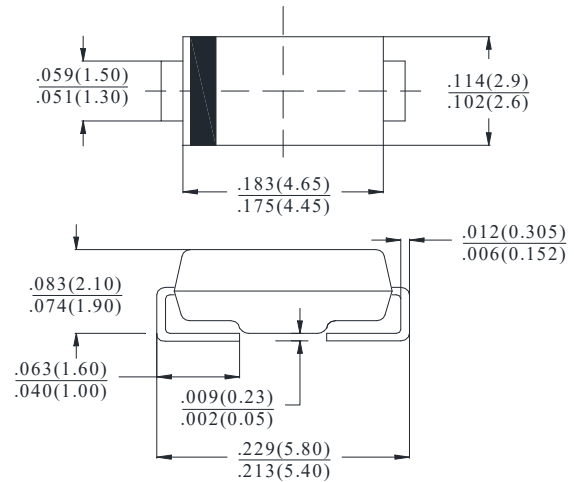
FEATURE

- 1.0W Power Dissipation
- Ideally Suited for Automatic Assembly
- 5.1V - 39V Nominal Zener Voltage Range
- Standard VZ Tolerance is $\pm 5\%$
- Easy pick and place
- High temperature soldering guaranteed:
260°C/10 seconds at terminals.

MECHANICAL DATA

- Case: SMA, Transfer Molded Epoxy
- Epoxy: UL94V-0 rate flame retardant
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: MIL-STD- 202E, Method 208 guaranteed
- Polarity Indicator: Cathode Band
- Mounting position: Any

SMA(DO-214AC)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise stated.

Single-phase, half-wave, 60HZ, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	SYM BOL	Value	units
DC power dissipation	P_d	1.0	W
Maximum instantaneous forward voltage@ IF=200mA	V_F	1.2	V
Storage Temperature	T_{STG}	-55 to +150	°C
Operating Junction Temperature	T_J	-55 to +150	°C

ELECTRICAL CHARACTERISTICS(TA=25°C unless otherwise noted)

Part Number	Zener Voltage Range (Note 3)			Test Current	Maximum Zener Impedance			Maximum reverse leakage current		I _{ZM} Max
	Typ. V _Z @I _{ZT}	Min V _Z @I _{ZT}	Max V _Z @I _{ZT}		I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	IR @ VR	
	V	V	V	mA	Ω	Ω	mA	uA	V	mA
SMAZ5.1	5.10	4.84	5.40	100	5.0	500	1.0	2.5	1.0	196
SMAZ5.6	5.60	5.32	5.88	100	2.0	250	2.0	5.0	2.0	171
SMAZ6.2	6.20	5.89	6.51	100	2.0	200	2.0	5.0	3.0	161
SMAZ6.8	6.80	6.46	7.14	100	2.0	200	1.0	5.0	4.0	147
SMAZ7.5	7.50	7.13	7.88	100	2.0	450	1.0	5.0	5.0	133
SMAZ8.2	8.20	7.79	8.61	100	2.0	200	1.0	5.0	6.0	122
SMAZ9.1	9.10	8.65	9.56	50	4.0	200	1.0	5.0	7.0	110
SMAZ10	10.00	9.50	10.50	50	4.0	200	1.0	1.0	7.6	100
SMAZ12	12.00	11.40	12.60	50	7.0	150	1.0	1.0	9.1	83
SMAZ15	15.00	14.25	15.75	50	10	150	1.0	1.0	11.4	67
SMAZ16	16.00	15.20	16.80	25	15	150	1.0	0.5	12.2	63

SMAZ18	18.00	17.10	18.90	25	15	150	1.0	0.5	13.7	56
SMAZ20	20.00	19.00	21.00	25	15	180	1.0	0.5	15.2	50
SMAZ22	22.00	20.90	23.10	25	15	180	1.0	0.5	16.7	45
SMAZ24	24.00	22.80	25.20	25	15	180	1.0	0.5	18.2	42
SMAZ27	27.00	25.65	28.35	25	15	200	1.0	0.5	20.5	37
SMAZ30	30.00	28.50	31.50	25	15	250	1.0	0.5	22.8	33
SMAZ33	33.00	31.35	34.65	25	15	300	1.0	0.5	25.1	30
SMAZ36	36.00	34.20	37.80	10	40	350	1.0	0.5	27.4	28
SMAZ39	39.00	37.05	40.95	10	40	450	1.0	0.5	29.6	26

RATING AND CHARACTERISTIC CURVES

FIG1: Power Temperature Derating Curve

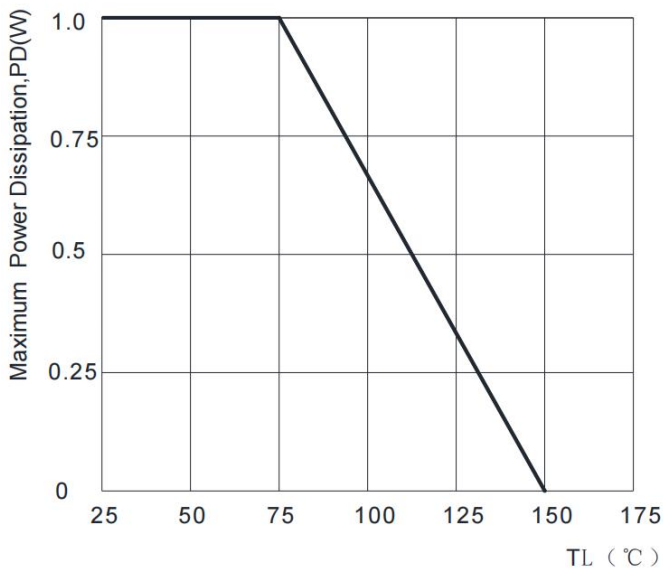


FIG2: Typical Zener Impedance

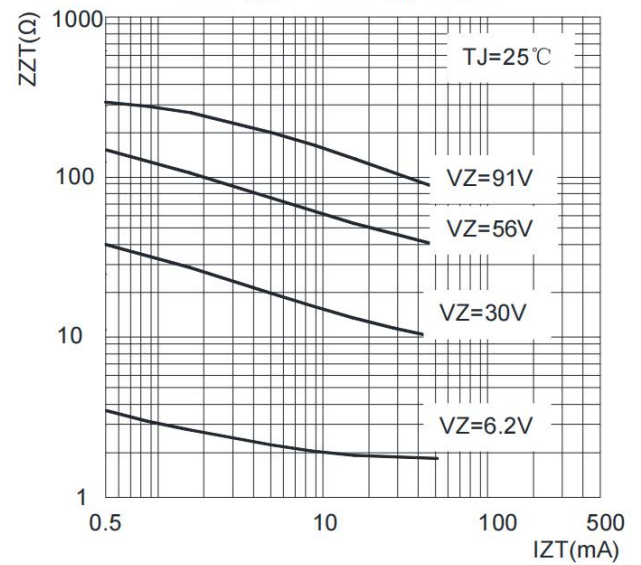


FIG3: Pulse Waveform

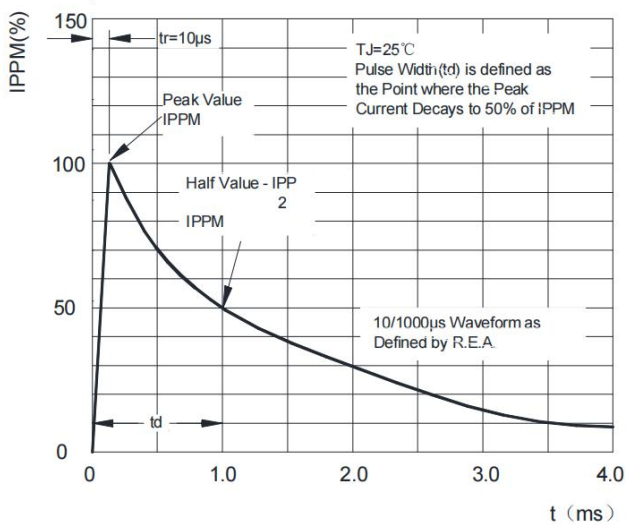
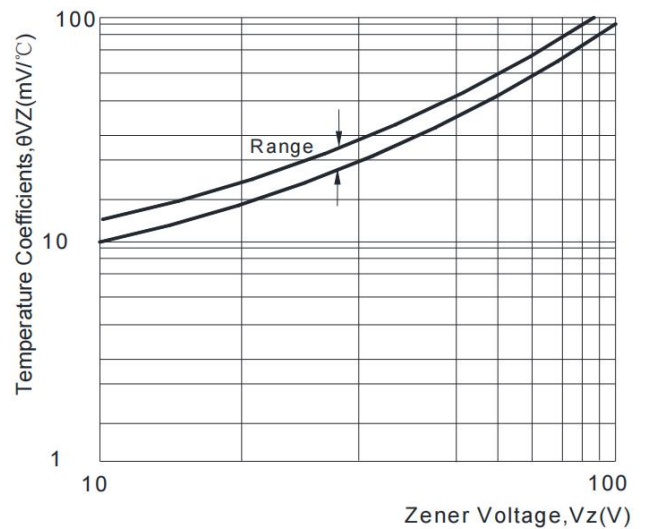
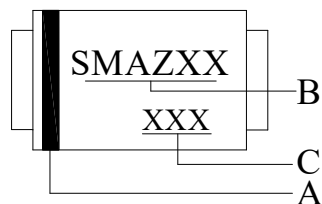


FIG4: Temperature Coefficients v.s. Zener Voltage



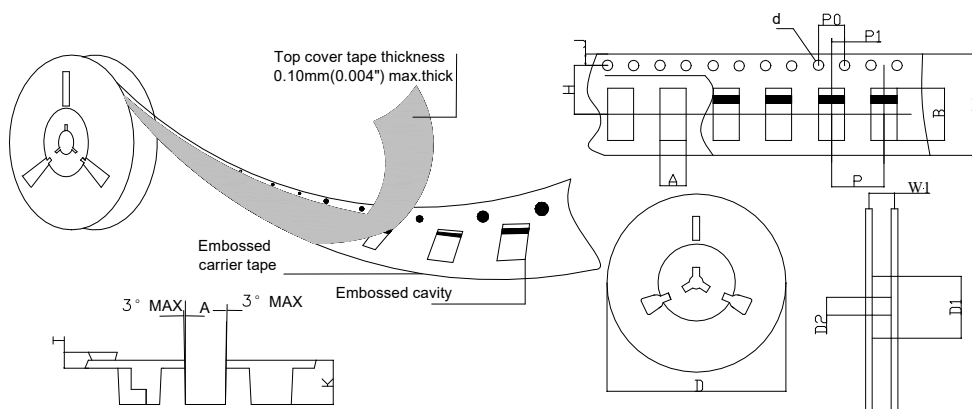
Marking and packaging illustration

1、Marking



SYMBOL	Explanation
A	Color Band Denotes Cathode
B	Product name
C	Date Code

2、Packaging



SPECIFICATIONS mm(inch)		PACKAGE	SPECIFICATIONS mm(inch)		PACKAGE
ITEM	SYM BOL	SMA (DO-214AC)	ITEM	SYM BOL	SMA (DO-214AC)
Carrier width	A	3.17(0.125)Max	Carrier depth	K	2.42(0.095)Typ
Carrier length	B	5.81(0.229)Max	Punch hole pitch	P	4.00(0.157)Typ
Sprocket hole	d	ø1.55(0.061)Typ	Sprocket hole pitch	P0	4.00(0.157)Typ
Reel outer diameter	D	330.0(13)Typ	Embossment center	P1	2.00(0.079)Typ
Reel inner diameter	D1	50.0(1.969)Min	Overall tape thickness	T	0.30(0.012)Typ
Feed hole diameter	D2	13.0(0.512)Typ	Tape width	W	12.0(0.472)Typ
Sprocket hole position	J	1.75(0.069)Typ	Reel width	W1	12.4(0.488)Min
Punch hole position	H	5.55(0.219)Typ			