

1.0W Surface Mount Zener Diodes

Features

- Glass Passivated chip junction
- Low Zener Impedance
- Excellent Clamping Capability
- High temperature soldering guaranteed: 260°C/10 seconds
- RoHS Compliance

SMA



Mechanical Data

Case:	SMA (DO-214AC) molded plastic
Epoxy:	Plastic package has UL flammability 94V-0
Terminals:	Solder plated, solderable per IEC 68-2-20
Polarity:	Color band denotes cathode
Weight:	0.064 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	Value	Unit	Conditions
P_{tot}	Power dissipation	1.0	W	T _a =25 °C,
P_{tot}	Power dissipation	3.0	W	T _a =25 °C, R _{thJA} = 25 °C / W
T_J, T_{STG}	Operating Junction and Storage Temperature Range	-65 to 175	°C	
V_F	Max. Forward Voltage drop	1.0	V	I _F =0.5A
R_{thJC}	Typical Thermal Resistance	25	°C/W	
R_{thJA}	PCB epoxy-glass path 1.5mm	150	°C/W	
	PCB epoxy-glass path 5 X 10mm	125	°C/W	
	Ceramic Plate (Al ₂ O ₃) path 5 X 10mm	100	°C/W	

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Z1SMA6V2 - Z1SMA240

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Part NO.	Marking Code	Nominal Zener Voltage @ I _{ZT}				Max. Zener Impedance	Max. Reverse Leakage Current I _R @ V _R	
		V _z			I _{ZT} (mA)		Z _{ZT} @ I _{ZT}	I _R (μA)
		Nom.	Min.	Max.				
Z1SMA6V2	EC	6.2	5.8	6.6	100	2	10	3
Z1SMA6V8	EE	6.8	6.4	7.2	100	2.5	10	4
Z1SMA7V5	ED	7.5	7.0	7.9	100	3	10	5
Z1SMA8V2	EF	8.2	7.7	8.7	100	3.5	10	6
Z1SMA9V1	EG	9.1	8.5	9.6	50	4	10	7
Z1SMA10	EH	10	9.4	10.6	50	4	1	7.5
Z1SMA11	EK	11	10.4	11.6	50	7	1	8.2
Z1SMA12	EL	12	11.4	12.7	50	7	1	9.1
Z1SMA13	EM	13	12.4	14.1	50	10	1	10
Z1SMA15	EN	15	13.8	15.6	50	10	1	11
Z1SMA16	EP	16	15.3	17.1	25	15	1	12
Z1SMA18	EQ	18	16.8	19.1	25	15	1	13
Z1SMA20	ER	20	18.8	21.2	25	15	1	15
Z1SMA22	ES	22	20.8	23.3	25	15	1	16
Z1SMA24	ET	24	22.8	25.6	25	15	1	18
Z1SMA27	EU	27	25.1	28.9	25	15	1	20
Z1SMA30	EV	30	28	32	25	15	1	22
Z1SMA33	EW	33	31	35	25	15	1	24
Z1SMA36	EX	36	34	38	10	40	1	27
Z1SMA39	EY	39	37	41	10	40	1	30
Z1SMA43	EZ	43	40	46	10	45	1	33
Z1SMA47	FD	47	44	50	10	45	1	36
Z1SMA51	FF	51	48	54	10	60	1	39
Z1SMA56	FG	56	52	60	10	60	1	43
Z1SMA62	FH	62	58	66	10	80	1	47
Z1SMA68	FK	68	64	72	10	80	1	51
Z1SMA75	FL	75	70	80	10	100	1	56
Z1SMA82	FM	82	77	87	10	100	1	62
Z1SMA91	FN	91	85	96	5	200	1	68
Z1SMA100	FP	100	94	106	5	200	1	75
Z1SMA110	FQ	110	104	116	5	250	1	82
Z1SMA120	FR	120	114	127	5	250	1	91
Z1SMA130	FS	130	124	141	5	300	1	100

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Z1SMA6V2 - Z1SMA240

Part NO.	Marking Code	Norminal Zener Voltage @ IZT				Max. Zener Impedance	Max. Reverse Leakage Current IR @ VR	
		V z			IZT(mA)		ZZT @ IZT	IR (μA)
		Nom.	Min.	Max.				
Z1SMA150	FT	150	138	156	5	300	1	110
Z1SMA160	FU	160	153	171	5	350	1	120
Z1SMA180	FV	180	168	191	5	500	1	130
Z1SMA200	FW	200	188	212	5	500	1	150
Z1SMA220	FE	220	208	233	1	2500	1	160
Z1SMA240	FZ	240	228	256	1	2550	1	180

Typical Characteristics Curves

Fig.1-Max. Continuous Power Dissipation

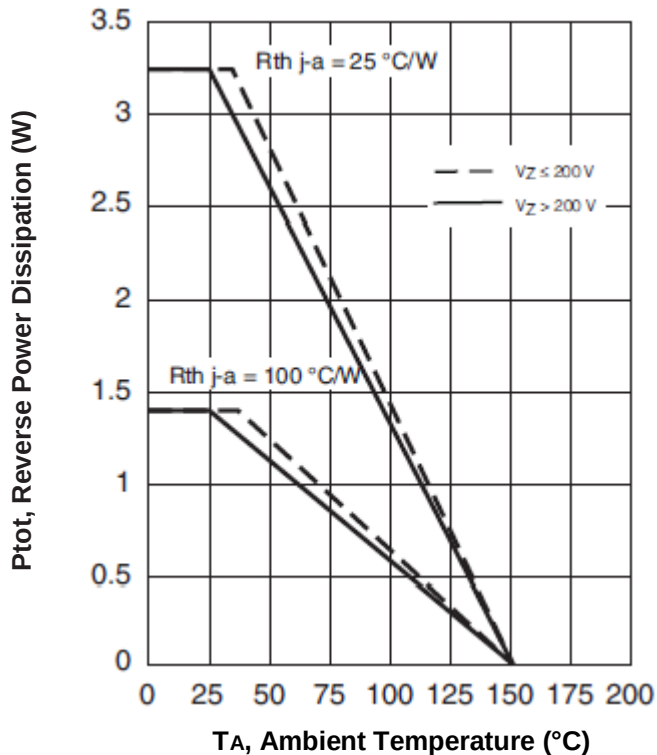
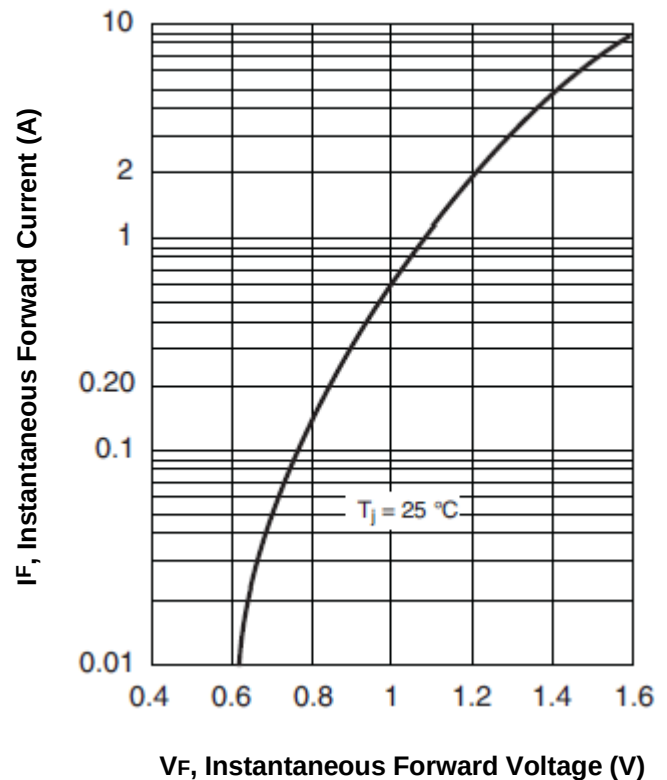


Fig.2- Typical Forward Characteristic



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Fig.3-Typical Zener Impedance

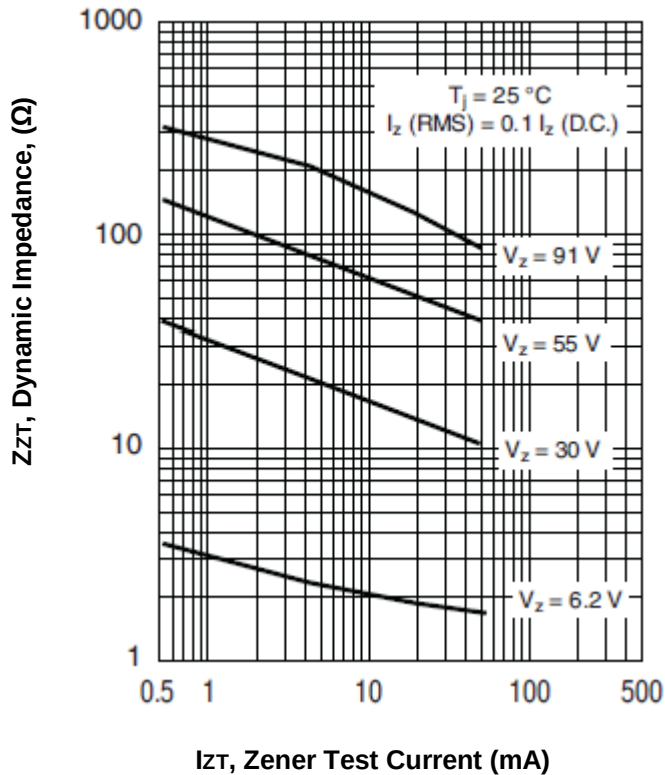


Fig.4-Typical Reverse Characteristics

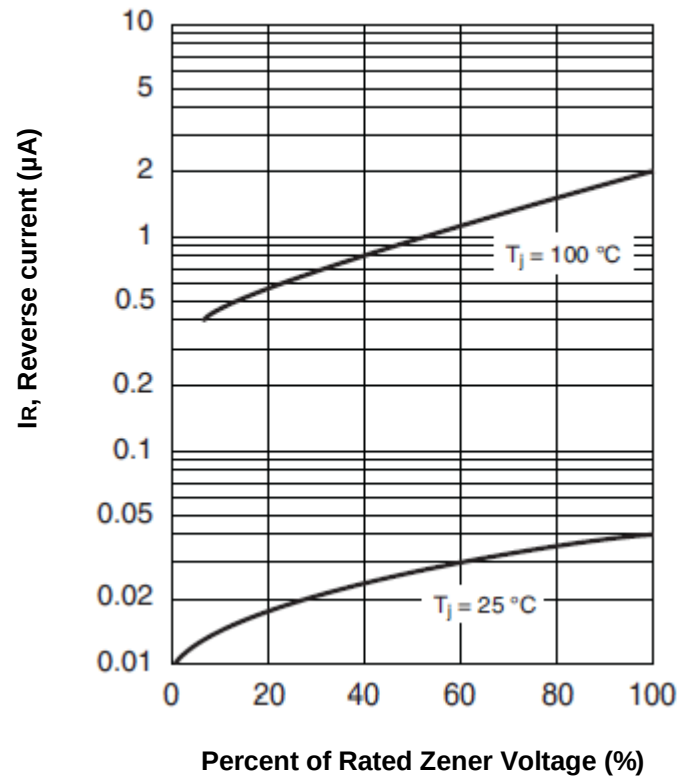


Fig.5-Typical Transient Thermal Impedance

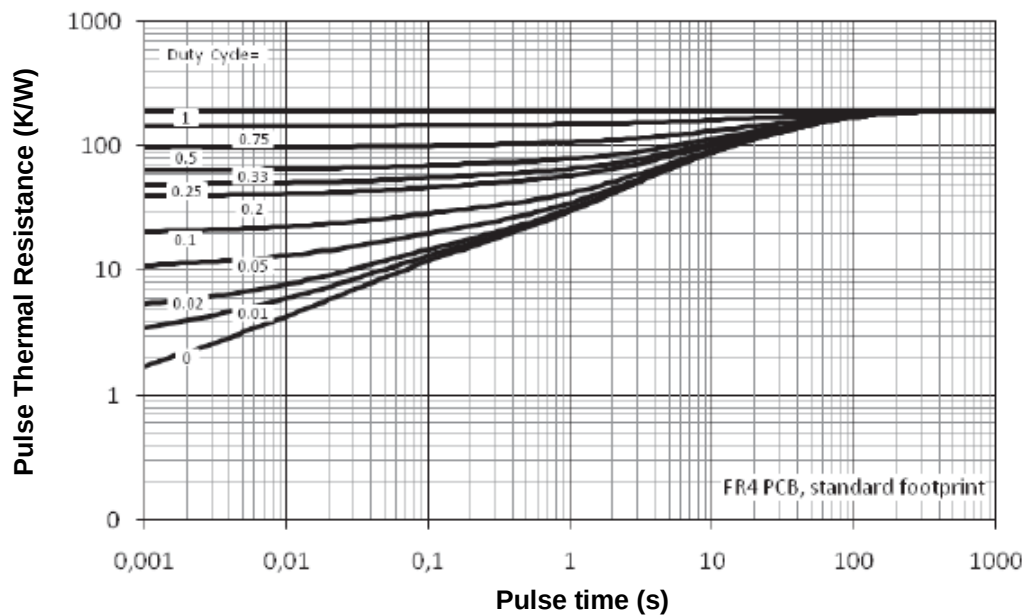
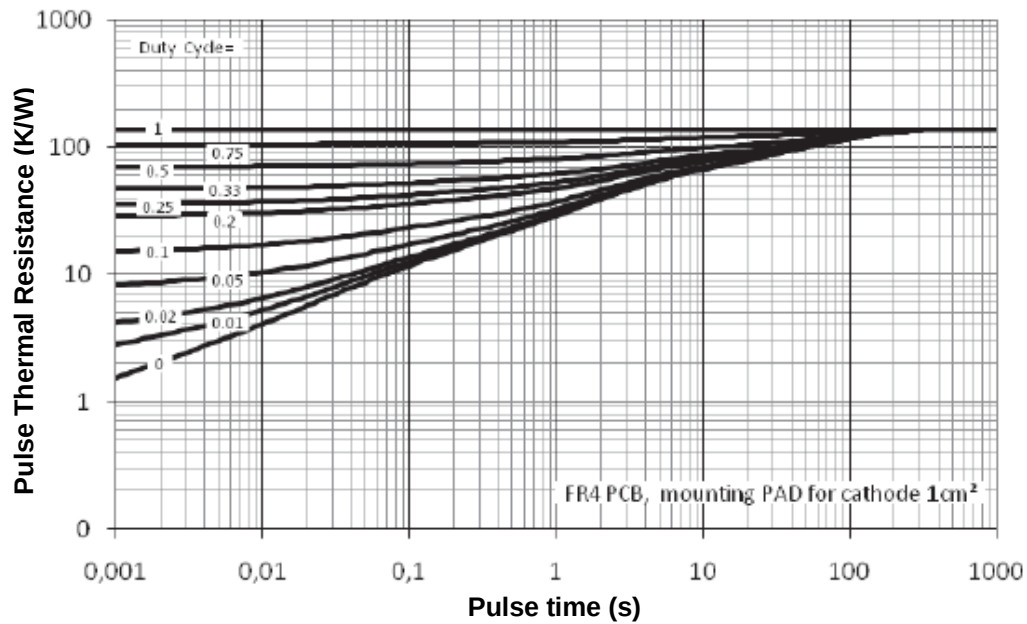
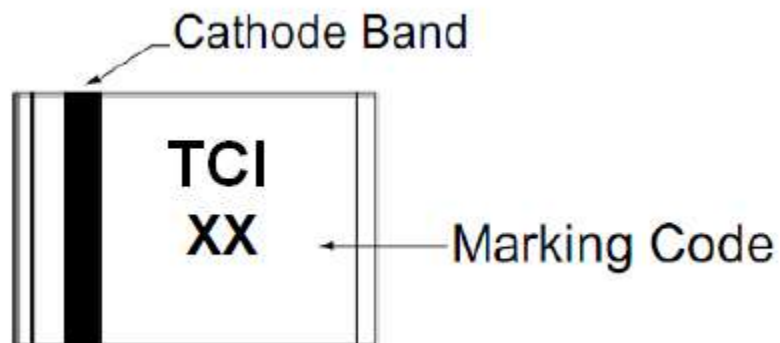


Fig.6-Typical Transient Thermal Impedance



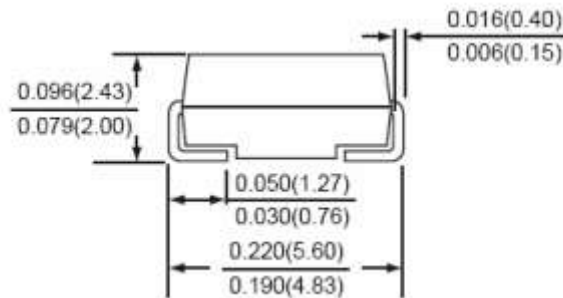
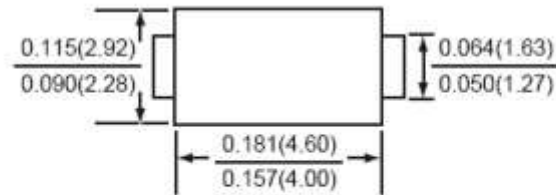
Marking Information:



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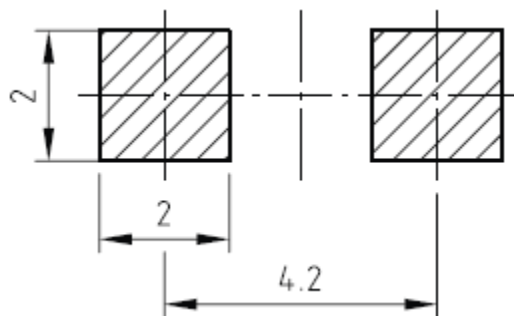
Z1SMA6V2 - Z1SMA240

Dimensions in inch (mm)



SMA (DO-214AC)

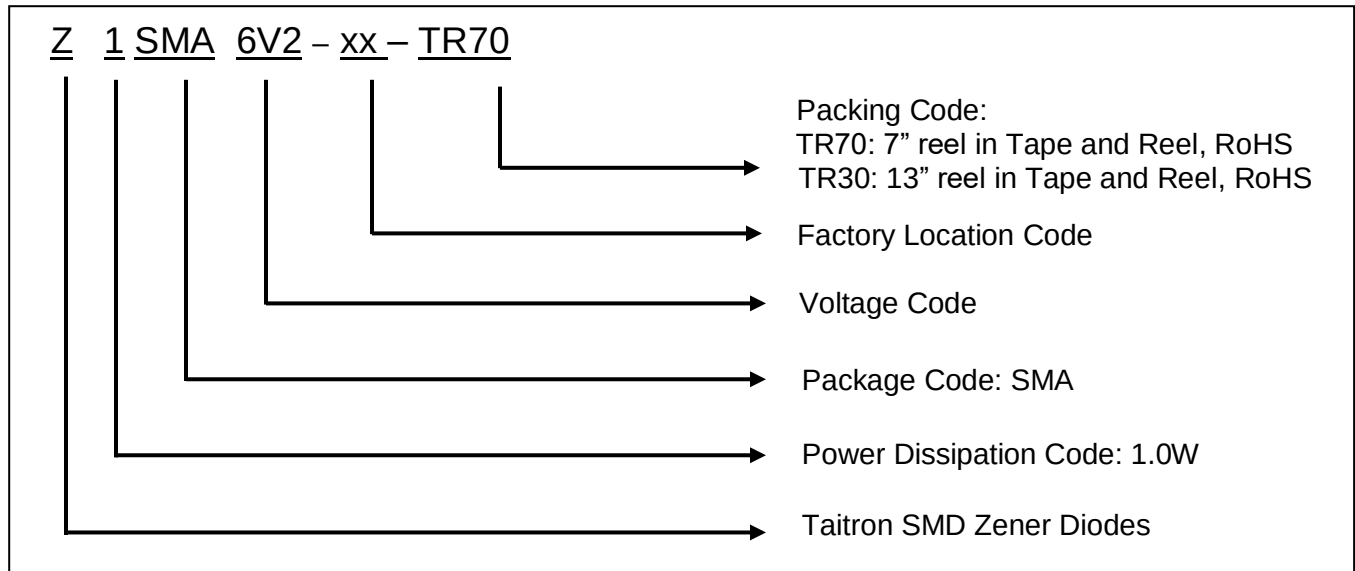
Mounting pad layout in mm



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Ordering Information



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