3.0V to 390V 1.0W Zener Diode

Description

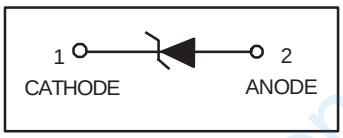
Type OVZ1xxxA series are 2-pin SMA package zener diodes possessing an allowable power dissipation of 1.0 Watt.

Features

- ✧ zener voltage from 3.0V to 390V
- ✧ 1.0 Watt Power Dissipation
- ✧ Standard zener voltage tolerance is ± 5%.

Applications

- ✧ Circuits for Constant Voltage
- ✧ Constant Current, Waveform clipper
- ✧ Surge absorber



Circuit Diagram



SMA

Absolute Maximum Rating （T_A = 25 °C, unless otherwise specified）

Rating	Symbol	Value	Units
Power Dissipation	P_D	1.0	W
Forward Voltage	V_F	1.2	V
Typical thermal resistance junction to ambient	$R_{\theta JA}$	75	°C/W
Operating Temperature	Tj	-55 ~ +150	℃
Storage Temperature	T_{stg}	-55 ~ +150	℃

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Electrical Characteristics （T_A = 25 °C, unless otherwise specified, V_F = 1.2 V Max. IF = 10 mA for all types）

Part Number	Device Marking Code	Nominal Zener Voltage @I_T			I_{ZT}(mA)	Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
		$V_{Z\ AVE.}$(V)	$V_{Z\ MIN.}$(V)	$V_{Z\ MAX.}$(V)		$Z_{ZT\ MAX.}$(Ω) @I_{ZT}	$Z_{ZK\ MAX.}$(Ω) @I_{ZK}	I_{ZK}(mA)	I_R(uA)@V_R	V_R(V)	I_{ZM} (mA)
OVZ1SMA4727A	727A	3.0	2.85	3.15	80.0	10.0	400.0	1.00	100.0	1.0	288.0
OVZ1SMA4728A	728A	3.3	3.14	3.47	76.0	10.0	400.0	1.00	100.0	1.0	274.0
OVZ1SMA4729A	729A	3.6	3.42	3.78	69.0	10.0	400.0	1.00	100.0	1.0	251.0
OVZ1SMA4730A	730A	3.9	3.71	4.10	64.0	9.0	400.0	1.00	50.0	1.0	232.0
OVZ1SMA4731A	731A	4.3	4.09	4.52	58.0	9.0	400.0	1.00	10.0	1.0	210.0
OVZ1SMA4732A	732A	4.7	4.47	4.94	53.0	8.0	500.0	1.00	10.0	1.0	192.0
OVZ1SMA4733A	733A	5.1	4.85	5.36	49.0	7.0	550.0	1.00	10.0	1.0	177.0
OVZ1SMA4734A	734A	5.6	5.32	5.88	45.0	5.0	600.0	1.00	10.0	2.0	161.0
OVZ1SMA4735A	735A	6.2	5.89	6.51	41.0	2.0	700.0	1.00	10.0	3.0	146.0
OVZ1SMA4736A	736A	6.8	6.46	7.14	37.0	3.5	700.0	1.00	10.0	4.0	133.0
OVZ1SMA4737A	737A	7.5	7.13	7.88	34.0	4.0	700.0	0.50	10.0	5.0	121.0
OVZ1SMA4738A	738A	8.2	7.79	8.61	31.0	4.5	700.0	0.50	10.0	6.0	110.0
OVZ1SMA4739A	739A	9.1	8.65	9.56	28.0	5.0	700.0	0.50	10.0	7.0	100.0
OVZ1SMA4740A	740A	10.0	9.50	10.50	25.0	7.0	700.0	0.25	10.0	7.6	91.0
OVZ1SMA4741A	741A	11.0	10.45	11.55	23.0	8.0	700.0	0.25	0.5	8.4	83.0
OVZ1SMA4742A	742A	12.0	11.40	12.60	21.0	9.0	700.0	0.25	0.5	9.1	76.0
OVZ1SMA4743A	743A	13.0	12.35	13.65	19.0	10.0	700.0	0.25	0.5	9.9	69.0
OVZ1SMA4744A	744A	15.0	14.25	15.75	17.0	14.0	700.0	0.25	0.5	11.4	61.0
OVZ1SMA4745A	745A	16.0	15.20	16.80	15.5	16.0	700.0	0.25	0.5	12.2	57.0
OVZ1SMA4746A	746A	18.0	17.10	18.90	14.0	20.0	750.0	0.25	0.5	13.7	50.0
OVZ1SMA4747A	747A	20.0	19.00	21.00	12.5	22.0	750.0	0.25	0.5	15.2	45.0
OVZ1SMA4748A	748A	22.0	20.90	23.10	11.5	23.0	750.0	0.25	0.5	16.7	41.0
OVZ1SMA4749A	749A	24.0	22.80	25.20	10.5	25.0	750.0	0.25	0.5	18.2	38.0
OVZ1SMA4750A	750A	27.0	25.65	28.35	9.5	35.0	750.0	0.25	0.5	20.6	34.0
OVZ1SMA4751A	751A	30.0	28.50	31.50	8.5	40.0	1000.0	0.25	0.5	22.8	30.0
OVZ1SMA4752A	752A	33.0	31.35	34.65	7.5	45.0	1000.0	0.25	0.5	25.1	27.0
OVZ1SMA4753A	753A	36.0	34.20	37.80	7.0	50.0	1000.0	0.25	0.5	27.4	25.0
OVZ1SMA4754A	754A	39.0	37.05	40.95	6.5	60.0	1000.0	0.25	0.5	29.7	23.0
OVZ1SMA4755A	755A	43.0	40.85	45.15	6.0	70.0	1500.0	0.25	0.5	32.7	22.0
OVZ1SMA4756A	756A	47.0	44.65	49.35	5.5	80.0	1500.0	0.25	0.5	35.8	19.0
OVZ1SMA4757A	757A	51.0	48.45	53.55	5.0	95.0	1500.0	0.25	0.5	38.8	18.0
OVZ1SMA4758A	758A	56.0	53.20	58.80	4.5	110.0	2000.0	0.25	0.5	42.6	16.0
OVZ1SMA4759A	759A	62.0	58.90	65.10	4.0	125.0	2000.0	0.25	0.5	47.1	14.0
OVZ1SMA4760A	760A	68.0	64.60	71.40	3.7	150.0	2000.0	0.25	0.5	51.7	13.0
OVZ1SMA4761A	761A	75.0	71.25	78.75	3.3	175.0	2000.0	0.25	0.5	56.0	12.0
OVZ1SMA4762A	762A	82.0	77.90	86.10	3.0	200.0	3000.0	0.25	0.5	62.2	11.0
OVZ1SMA4763A	763A	91.0	86.45	95.55	2.8	250.0	3000.0	0.25	0.5	69.2	10.0
OVZ1SMA4764A	764A	100.0	95.00	105.00	2.5	350.0	3000.0	0.25	0.5	76.0	9.0
OVZ1110A	711Z	110.0	104.50	115.50	2.3	450.0	4000.0	0.25	0.5	83.6	8.6
OVZ1120A	712Z	120.0	114.00	126.00	2.0	550.0	4500.0	0.25	0.5	91.2	7.8
OVZ1130A	713Z	130.0	123.50	136.50	1.9	700.0	5000.0	0.25	0.5	98.8	7.0
OVZ1150A	715Z	150.0	142.50	157.50	1.7	1000.0	6000.0	0.25	0.5	114.0	6.4
OVZ1160A	716Z	160.0	152.00	168.00	1.6	1100.0	6500.0	0.25	0.5	121.6	5.8
OVZ1180A	718Z	180.0	171.00	189.00	1.4	1200.0	7000.0	0.25	0.5	136.8	5.2
OVZ1200A	720Z	200.0	190.00	210.00	1.2	1900.0	9990.0	0.25	0.5	152.0	4.7
OVZ1220A	722Z	220.0	209.00	231.00	1.0	1600.0	8000.0	0.25	0.5	167.2	4.0
OVZ1240A	724Z	240.0	228.00	252.00	0.9	1800.0	8500.0	0.25	0.5	182.4	3.8
OVZ1250A	725Z	250.0	237.50	262.50	0.9	2000.0	9000.0	0.25	0.5	190.0	3.6
OVZ1270A	727Z	270.0	256.50	283.50	0.8	2100.0	9000.0	0.25	0.5	205.0	3.3
OVZ1300A	730Z	300.0	285.00	315.00	0.8	2300.0	9500.0	0.25	0.5	228.0	3.0
OVZ1330A	733Z	330.0	313.50	346.50	0.7	2500.0	9500.0	0.25	0.5	250.2	2.7
OVZ1360A	736Z	360.0	342.00	378.00	0.7	2700.0	10000.0	0.25	0.5	275.0	2.5
OVZ1390A	739Z	390.0	370.50	409.50	0.7	3000.0	10000.0	0.25	0.5	300.0	2.2

Notes : (1) The type number listed have a standard tolerance on the nominal zener voltage of ± 5%.
(2) The revese surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on IZT per JEDEC Method

Typical Characteristics （at TA = 25 °C, unless otherwise specified）

FIG1: Maximum Continuous Power Dissipation

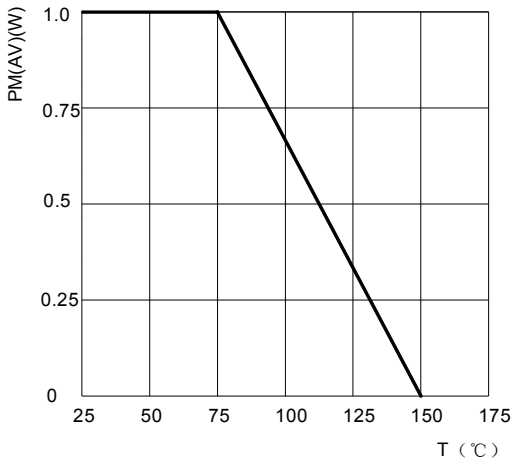


FIG2:Typical Zener Impedance

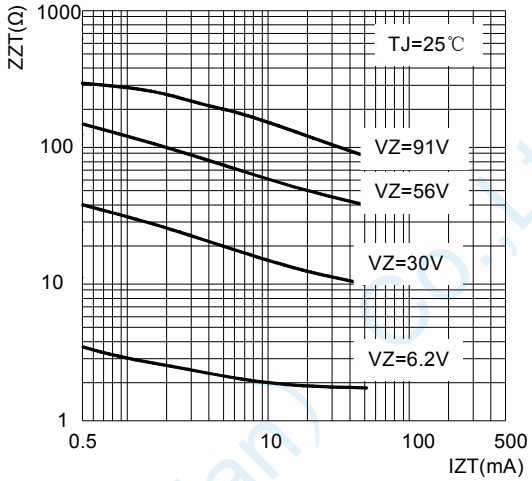


FIG3:Typical Instantaneous Forward Characteristics for SMA4763A

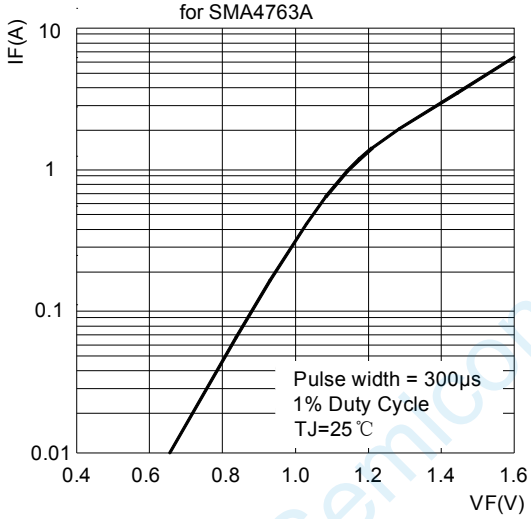
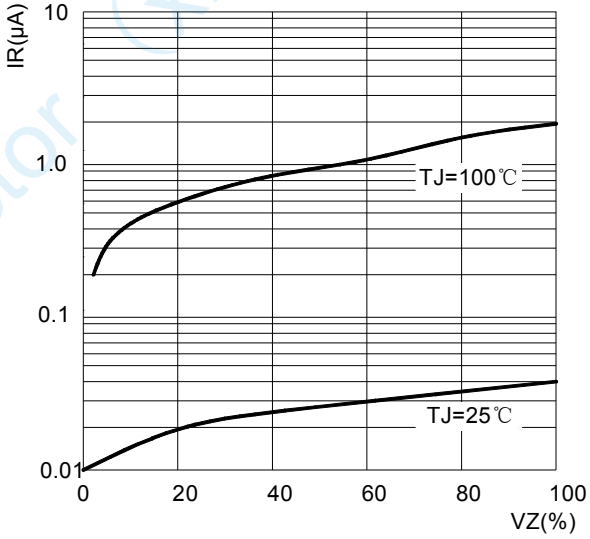


FIG4:Typical Reverse Characteristics



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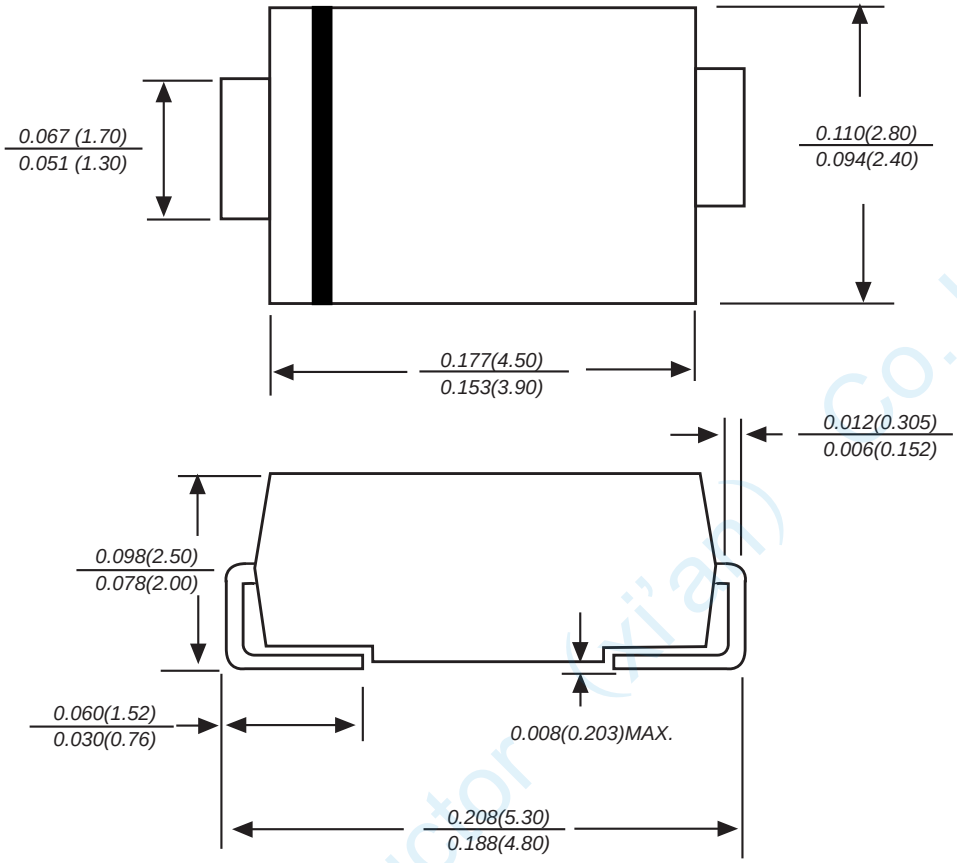
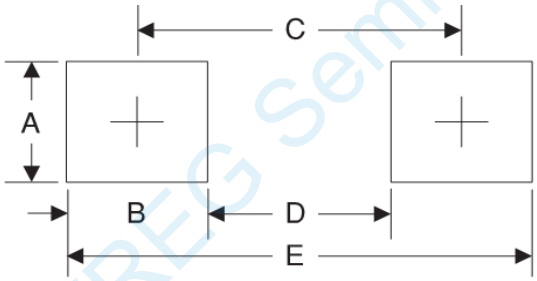
Package Information



Recommend PCB Layout



Symbol	Unit (mm)	Unit (inch)
A	1.68	0.066
B	1.52	0.060
C	3.90	0.154
D	2.41	0.095
E	5.45	0.215

Ordering Information

Part number	Material	Type	Reel size	MOQ	MOQ/internal box	MOQ/carton
OVZ1xxxA Series	GREEN	T/R	11 inch	5k/reel	2reel= 10k/box	8boxes=80k/carton

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