

## Features

- Silicon power zener diodes
- For use in stabilizing and clipping circuits with high power rating.
- Suffix "A" for  $\pm 5\%$  tolerance.


 Package:  
 DO-214AC (SMA)

**RoHS**  
 COMPLIANT

## Maximum Rating ( $T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Zener Current		See Next Page	
Power Dissipation at $T_L=70^\circ\text{C}$	$P_{tot}$	1	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_S$	-55to+150	$^\circ\text{C}$
Typical Thermal Resistance (Note1)	$R_{\theta JA}$	125	$^\circ\text{C/W}$
	$R_{\theta JL}$	30	$^\circ\text{C/W}$

Note1: Thermal resistance from junction to ambient &amp; lead, mounted on PCB with 5.0x5.0mm copper pads

## Electrical Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise specified)

Part number	Device Marking Code	Nominal Zener Voltage at $I_{zT}$ Vz (Volts) <sup>(1)</sup>	Test Current $I_{zT}$ (mA)	Maximum Zener Impedance <sup>(2)</sup>			Maximum Reverse Leakage Current		Maximum Surge Current <sup>(3)</sup> $I_{RM}$ (mApk)	Maximum Regulator Current <sup>(4)</sup> at $T_A=50^\circ\text{C}$ $I_{zM}$ (mA)
				$Z_{zT}$ at $I_{zT}$ ( $\Omega$ )	$Z_{zK}$ ( $\Omega$ )	$A_t I_{zK}$ (mA)	$I_R$ ( $\mu\text{A}$ )	at $V_R$ (Volts)		
1SMA4738A	4738A	8.2	31	4.5	700	0.5	10	6	550	122
1SMA4739A	4739A	9.1	28	5.0	700	0.5	10	7	500	110
1SMA4740A	4740A	10	25	7	700	0.25	10	7.6	454	100
1SMA4741A	4741A	11	23	8	700	0.25	5	8.4	414	83
1SMA4742A	4742A	12	21	9	700	0.25	5	9.1	380	76
1SMA4743A	4743A	13	19	10	700	0.25	5	9.9	344	69
1SMA4744A	4744A	15	17	14	700	0.25	5	11.4	304	61
1SMA4745A	4745A	16	15.5	16	700	0.25	5	12.2	285	57
1SMA4746A	4746A	18	14	20	750	0.25	5	13.7	250	50
1SMA4747A	4747A	20	12.5	22	750	0.25	5	15.2	225	45
1SMA4748A	4748A	22	11.5	23	750	0.25	5	16.7	205	41
1SMA4749A	4749A	24	10.5	25	750	0.25	5	18.2	190	38

## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)

Part number	Device Marking Code	Nominal Zener Voltage at I <sub>ZT</sub> Vz (Volts) <sup>(1)</sup>	Test Current I <sub>ZT</sub> (mA)	Maximum Zener Impedance <sup>(2)</sup>			Maximum Reverse Leakage Current		Maximum Surge Current <sup>(3)</sup> I <sub>RM</sub> (mApk)	Maximum Regulator Current <sup>(4)</sup> at T <sub>A</sub> =50°C I <sub>ZM</sub> (mA)
				Z <sub>ZT</sub> at I <sub>ZT</sub> (Ω)	Z <sub>ZK</sub> (Ω)	At I <sub>ZK</sub> (mA)	I <sub>R</sub> (uA)	at V <sub>R</sub> (Volts)		
1SMA4750A	4750A	27	9.5	35	750	0.25	5	20.6	170	34
1SMA4751A	4751A	30	8.5	40	1000	0.25	5	22.8	150	30
1SMA4752A	4752A	33	7.5	45	1000	0.25	5	25.1	135	27
1SMA4753A	4553A	36	7.0	50	1000	0.25	5	27.4	125	25
1SMA4754A	4754A	39	6.5	60	1000	0.25	5	29.7	115	23
1SMA4755A	4755A	43	6.0	70	1500	0.25	5	32.7	110	22
1SMA4756A	4756A	47	5.5	80	1500	0.25	5	35.8	95	19
1SMA4757A	4757A	51	5.0	95	1500	0.25	5	38.8	90	18
1SMA4758A	4758A	56	4.5	110	2000	0.25	5	42.6	80	16
1SMA4759A	4759A	62	4.0	125	2000	0.25	5	47.1	70	14
1SMA4760A	4760A	68	3.7	150	2000	0.25	5	51.7	65	13
1SMA4761A	4761A	75	3.3	175	2000	0.25	5	56.0	60	12
1SMA4762A	4762A	82	3.0	200	3000	0.25	5	62.2	55	11
1SMA4763A	4763A	91	2.8	250	3000	0.25	5	69.2	50	10
1SMA4764A	4764A	100	2.5	350	3000	0.25	5	76	45	9

Notes: (1) Measured under thermal equilibrium and DC test conditions , Standard voltage tolerance is 10%, suffix A±5%.

(2) The Zener impedance is derived from the 1KHZ AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (I<sub>ZT</sub> or I<sub>ZK</sub>) is superimposed on I<sub>ZT</sub> or I<sub>ZK</sub>. Zener impedance is measure at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.

(3) Maximum surge current: Surge current is a non-repetitive,8.3ms pulse width square wave or equivalent sine-wave superimposed on I<sub>ZT</sub> per JEDEC method.

(4) Valid provided that electrodes at a distance of 10 mm from case are kept at ambient temperature.

## Ratings and Characteristic Curves (at 25°C unless otherwise specified)

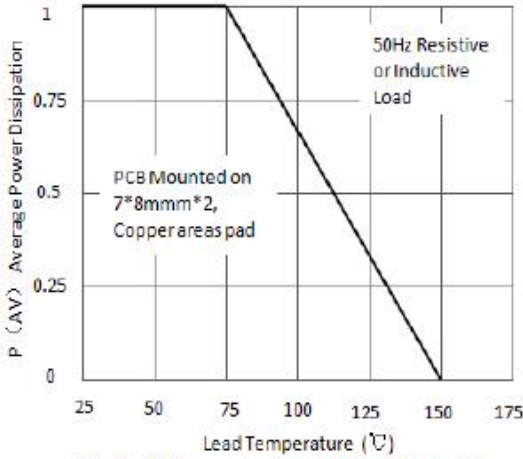


Fig.1 Maximum Continuous Power Dissipation

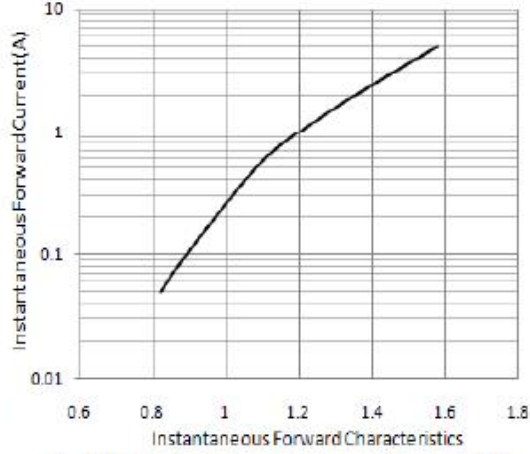


Fig.2 Typical Instantaneous Forward Characteristics

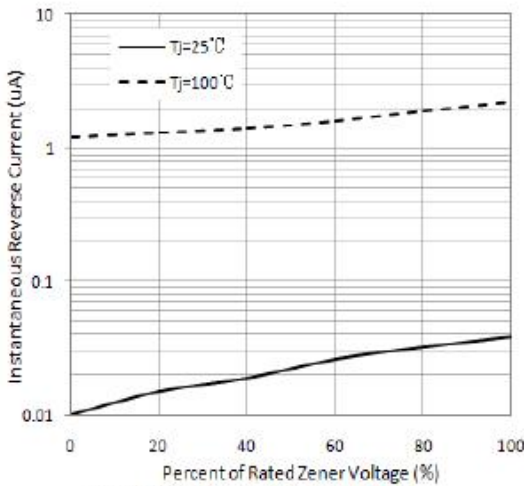


Fig.3 Typical Reverse Characteristics

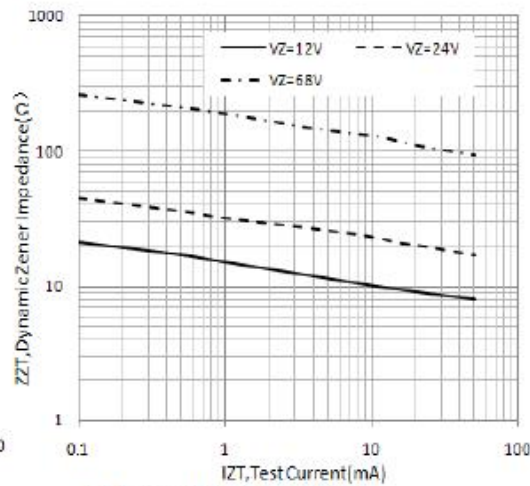


Fig.4 Typical Zener Impedance

## Package Outline Dimensions

## SMA in inches(millimeters)

