

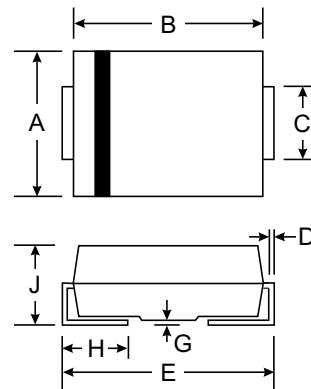
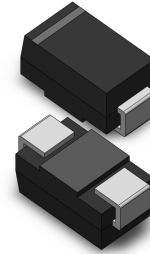
**VOLTAGE RANGE: 2.4 - 200V**  
**POWER: 1.3Watts**

### Features

- Complete Voltage Range 6.8 to 200 Volts
- High peak reverse power dissipation
- High reliability
- Low leakage current

### Mechanical Data

- Case : SMA (DO-214AC) Molded plastic
- Epoxy : UL94V-O rate flame retardant
- Lead : Lead formed for Surface mount
- Polarity : Color band denotes cathode end
- Mounting position : Any
- Weight : 0.064 gram



SMA(DO-214AC)		
Dim	Min	Max
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.10	0.20
H	0.76	1.52
J	2.01	2.62
All Dimensions in mm		

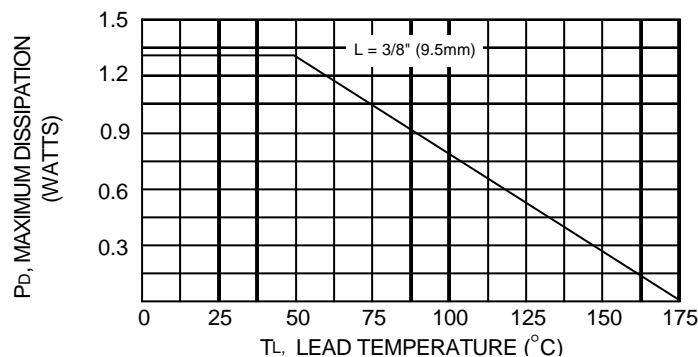
### Maximum Ratings @ T<sub>A</sub> = 25°C unless otherwise specified

Rating	Symbol	Value	Unit
DC Power Dissipation at T <sub>L</sub> = 50 °C (Note1)	P <sub>D</sub>	1.3	W
Maximum Forward Voltage at I <sub>F</sub> = 200 mA	V <sub>F</sub>	1.2	V
Maximum Thermal Resistance Junction to Ambient Air (Note2)	R <sub>θJA</sub>	130	K / W
Junction Temperature Range	T <sub>J</sub>	- 65 to + 200	°C
Storage Temperature Range	T <sub>STG</sub>	- 65 to + 200	°C

#### Notes :

- (1) T<sub>L</sub> = Lead temperature at 3/8 " (9.5mm) from body
- (2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.

Fig. 1 POWER TEMPERATURE DERATING CURVE





## ELECTRICAL CHARACTERISTICS Rating at = 25 °C ambient temperature unless otherwise specified

TYPE	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	Vz @ IZT	IZT	ZZT @ IZT	ZZK @ IZK	IZK	IR @ VR		IZM
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
1SMA2V4	2.4	80	20	400	1.0	150	1.0	410
1SMA2V7	2.7	80	20	400	1.0	150	1.0	370
1SMA3V0	3.0	80	20	400	1.0	100	1.0	340
1SMA3V3	3.3	80	20	400	1.0	40	1.0	320
1SMA3V6	3.6	70	20	500	1.0	20	1.0	290
1SMA3V9	3.9	60	15	500	1.0	10	1.0	280
1SMA4V3	4.3	50	13	500	1.0	3.0	1.0	250
1SMA4V7	4.7	45	13	500	1.0	3.0	1.0	215
1SMA5V1	5.1	45	10	500	1.0	1.0	1.5	200
1SMA5V6	5.6	45	7.0	400	1.0	1.0	2.0	190
1SMA6V2	6.2	35	4.0	300	1.0	1.0	3.0	170
1SMA6V8	6.8	35	3.5	300	1.0	50	4.0	155
1SMA7V5	7.5	35	3.0	200	0.5	50	4.5	140
1SMA8V2	8.2	25	5.0	200	0.5	50	6.2	130
1SMA9V1	9.1	25	5.0	200	0.5	50	6.8	120
1SMA10	10	25	7.0	200	0.5	50	7.5	105
1SMA11	11	20	8.0	300	0.5	50	8.2	97
1SMA12	12	20	9.0	350	0.5	0.5	9.1	88
1SMA13	13	20	10	400	0.5	0.5	10	79
1SMA15	15	15	15	500	0.5	0.5	11	71
1SMA16	16	15	15	500	0.5	0.5	12	66
1SMA18	18	15	20	500	0.5	0.5	13	62
1SMA20	20	10	24	600	0.5	0.5	15	56
1SMA22	22	10	25	600	0.5	0.5	16	52
1SMA24	24	10	25	600	0.5	0.5	18	47
1SMA27	27	8.0	30	750	0.25	0.5	20	41
1SMA30	30	8.0	30	1000	0.25	0.5	22	36
1SMA33	33	8.0	35	1000	0.25	0.5	24	33
1SMA36	36	8.0	40	1000	0.25	0.5	27	30
1SMA39	39	6.0	50	1000	0.25	0.5	30	28
1SMA43	43	6.0	50	1000	0.25	0.5	33	26
1SMA47	47	4.0	90	1500	0.25	0.5	36	23
1SMA51	51	4.0	115	1500	0.25	0.5	39	21
1SMA56	56	4.0	120	2000	0.25	0.5	43	19
1SMA62	62	4.0	125	2000	0.25	0.5	47	16
1SMA68	68	4.0	130	2000	0.25	0.5	51	15
1SMA75	75	4.0	135	2000	0.25	0.5	56	14
1SMA82	82	2.7	200	3000	0.25	0.5	62	12
1SMA91	91	2.7	250	3000	0.25	0.5	68	10
1SMA100	100	2.7	350	3000	0.25	0.5	75	9.4
1SMA110	110	2.7	450	4000	0.25	0.5	82	8.6
1SMA120	120	2.0	550	4500	0.25	0.5	91	7.8
1SMA130	130	2.0	700	5000	0.25	0.5	100	7.0
1SMA150	150	2.0	1000	6000	0.25	0.5	110	6.4
1SMA160	160	1.5	1100	6500	0.25	0.5	120	5.8
1SMA180	180	1.5	1200	7000	0.25	0.5	130	5.2
1SMA200	200	1.5	1500	8000	0.25	0.5	150	4.7

Note: (1) The type number listed have a standard tolerance on the nominal zener voltage of  $\pm 5.0\%$ .



## ELECTRICAL CHARACTERISTICS

Rating at = 25 °C ambient temperature unless otherwise specified

TYPE	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	Vz @ IZT	IZT	ZzT @ IZT	ZzK @ IZK	IZK	IR @ VR		IZM
<b>1SMA130</b>	130	2.0	700	5000	0.25	0.5	100	7.0
<b>1SMA150</b>	150	2.0	1000	6000	0.25	0.5	110	6.4
<b>1SMA160</b>	160	1.5	1100	6500	0.25	0.5	120	5.8
<b>1SMA180</b>	180	1.5	1200	7000	0.25	0.5	130	5.2
<b>1SMA200</b>	200	1.5	1500	8000	0.25	0.5	150	4.7