



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**SMA452H  
THRU  
SMA45D0**

**SURFACE MOUNT ZENER DIODES**

**FEATURES**

- \* Voltage Range: 2.7V to 200V
- \* High peak reverse power dissipation
- \* Standard zener voltage tolerance is  $\pm 5\%$ .

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 0.064 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

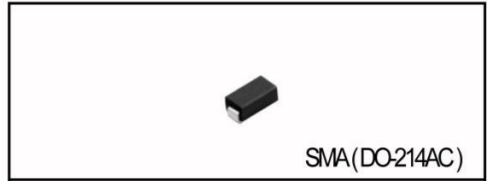
Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

**MAXIMUM RATINGS**

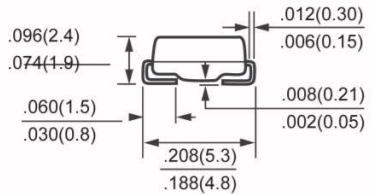
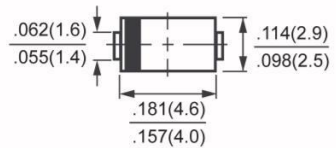
Rating at 25 °C ambient temperature unless otherwise specified

Rating	Symbol	Value	Unit
DC Power Dissipation at $T_L = 75^\circ\text{C}$ (Note1)	$P_D$	2.0	W
Maximum Forward Voltage at $I_F = 200\text{ mA}$	$V_F$	1.2	V
Junction Temperature Range	$T_J$	- 55 to + 150	$^\circ\text{C}$
Storage Temperature Range	$T_S$	- 55 to + 150	$^\circ\text{C}$

Note :  
(1)  $T_L$  = Lead temperature at 5.0 mm<sup>2</sup> ( 0.013 mm thick ) copper land areas.

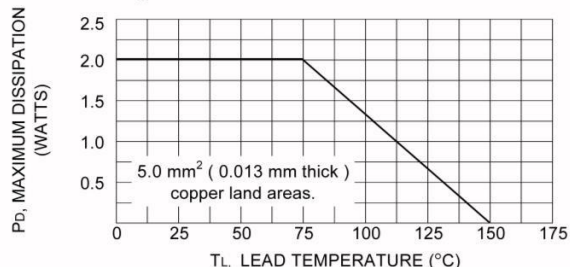


SMA(DO-214AC)



Dimensions in inches and (millimeters)

**Fig. 1 POWER TEMPERATURE DERATING CURVE**



## RATING AND CHARACTERISTIC CURVES (SMA452H THRU SMA45D0)

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)
SMA452H	2.7	80	10	400	1.0	100	1.0	660
SMA453A	3.0	160	8.0	400	1.0	100	1.0	600
SMA453D	3.3	145	8.0	400	1.0	80	1.0	545
SMA453G	3.6	139	5.0	400	1.0	80	1.0	504
SMA453J	3.9	128	5.0	400	1.0	50	1.0	468
SMA454D	4.3	116	4.5	400	1.0	50	1.0	434
SMA454H	4.7	106	4.5	550	1.0	50	1.0	386
SMA455B	5.1	98.0	3.5	600	1.0	50	1.0	356
SMA455G	5.6	89.5	2.5	500	1.0	50	2.0	324
SMA456C	6.2	80.5	1.5	700	1.0	50	3.0	292
SMA456I	6.8	73.5	2.0	700	1.0	50	4.0	266
SMA457F	7.5	66.5	2.0	700	0.5	50	5.0	242
SMA458C	8.2	61.0	2.3	700	0.5	50	6.0	220
SMA459B	9.1	55.0	2.5	700	0.5	50	7.0	200
SMA4510	10	50.0	3.5	700	0.25	50	7.6	182
SMA4511	11	45.5	4.0	700	0.25	50	8.4	166
SMA4512	12	41.5	4.5	700	0.25	1.0	9.1	152
SMA4513	13	38.5	5.0	700	0.25	0.5	9.9	138
SMA4514	14	35.7	5.5	700	0.25	0.5	10.6	130
SMA4515	15	33.4	7.0	700	0.25	0.5	11.4	122
SMA4516	16	31.2	8.0	700	0.25	0.5	12.2	114
SMA4517	17	29.4	9.0	750	0.25	0.5	13.0	107
SMA4518	18	27.8	10	750	0.25	0.5	13.7	100
SMA4519	19	26.3	11	750	0.25	0.5	14.4	95
SMA4520	20	25.0	11	750	0.25	0.5	15.2	90
SMA4522	22	22.8	12	750	0.25	0.5	16.7	82
SMA4524	24	20.8	13	750	0.25	0.5	18.2	76
SMA4527	27	18.5	18	750	0.25	0.5	20.6	68
SMA4530	30	16.6	20	1000	0.25	0.5	22.5	60
SMA4533	33	15.1	23	1000	0.25	0.5	25.1	55
SMA4536	36	13.9	25	1000	0.25	0.5	27.4	50
SMA4539	39	12.8	30	1000	0.25	0.5	29.7	47
SMA4543	43	11.6	35	1500	0.25	0.5	32.7	43
SMA4547	47	10.6	40	1500	0.25	0.5	35.8	39
SMA4551	51	9.8	48	1500	0.25	0.5	38.8	36
SMA4556	56	9.0	55	2000	0.25	0.5	42.6	32
SMA4562	62	8.1	60	2000	0.25	0.5	47.1	29
SMA4568	68	7.4	75	2000	0.25	0.5	51.7	27
SMA4575	75	6.7	90	2000	0.25	0.5	56.0	24
SMA4582	82	6.1	100	3000	0.25	0.5	62.2	22
SMA4591	91	5.5	125	3000	0.25	0.5	69.2	20
SMA45B0	100	5.0	175	3000	0.25	0.5	76.0	18
SMA45B1	110	4.5	250	4000	0.25	0.5	83.6	17
SMA45B2	120	4.2	325	4500	0.25	0.5	91.2	15
SMA45B3	130	3.8	400	5000	0.25	0.5	98.8	14
SMA45B4	140	3.6	500	5500	0.25	0.5	106.4	13
SMA45B5	150	3.3	575	6000	0.25	0.5	114.0	12
SMA45B6	160	3.1	650	6500	0.25	0.5	121.6	11
SMA45B7	170	2.9	675	7000	0.25	0.5	130.4	11
SMA45B8	180	2.8	725	7000	0.25	0.5	136.8	10
SMA45B9	190	2.6	825	8000	0.25	0.5	144.8	10
SMA45D0	200	2.5	900	8000	0.25	0.5	152.0	9.0

NOTE: Standard Zener Voltage Tolerance ± 5%