

IV. Zener Diode

SMD Zener Diode (2.0 Watt) SZ453G~SZ45D0

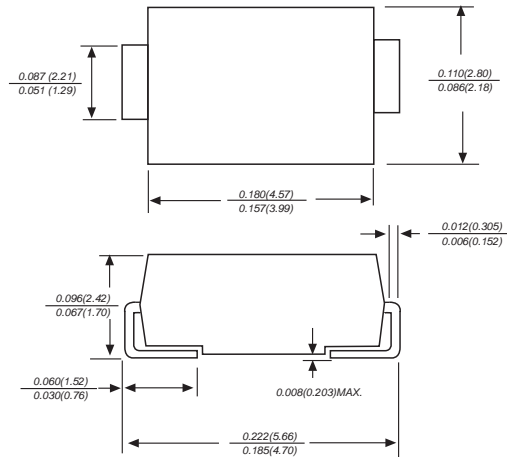
(Package: SMA (DO-214AC))

FEATURES

- Silicon planar power zener diodes.
- For use in stabilizing and clipping circuits with high power rating.
- For surface mounted applications in order to optimize board space.
- Built-in strain relief.
- Low leakage current.
- Low inductance.

MECHANICAL DATA

- Case : Molded plastic SMA(DO-214AC)
- Epoxy : UL94V-0 rate flame retardant
- Polarity : Color band denotes cathode
- Marking : Type number
- Weight : 0.058 grams



Case: SMA
Dimensions in inches and (millimeters)

Ratings & Electrical Characteristics

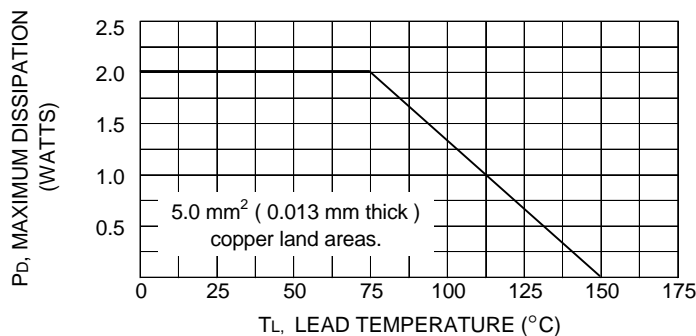
Ratings at 25 °C ambient temperature unless otherwise specified.

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

Note :

(1) T_L = Lead temperature at 5.0 mm^2 (0.013 mm thick) copper land areas.

Fig. 1 POWER TEMPERATURE DERATING CURVE



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Type Number	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)
SZ453G	3.6	139	5.0	400	1.0	80	1.0	504
SZ453J	3.9	128	5.0	400	1.0	30	1.0	468
SZ454D	4.3	116	4.5	400	1.0	20	1.0	434
SZ454H	4.7	106	4.5	550	1.0	5.0	1.0	386
SZ455B	5.1	98.0	3.5	600	1.0	5.0	1.0	356
SZ455G	5.6	89.5	2.5	500	1.0	5.0	2.0	324
SZ456C	6.2	80.5	1.5	700	1.0	5.0	3.0	292
SZ456I	6.8	73.5	2.0	700	1.0	50	4.0	266
SZ457F	7.5	66.5	2.0	700	0.5	50	5.0	242
SZ458C	8.2	61.0	2.3	700	0.5	50	6.0	220
SZ459B	9.1	55.0	2.5	700	0.5	50	7.0	200
SZ4510	10	50.0	3.5	700	0.25	50	7.6	182
SZ4511	11	45.5	4.0	700	0.25	50	8.4	166
SZ4512	12	41.5	4.5	700	0.25	1.0	9.1	152
SZ4513	13	38.5	5.0	700	0.25	0.5	9.9	138
SZ4514	14	35.7	5.5	700	0.25	0.5	10.6	130
SZ4515	15	33.4	7.0	700	0.25	0.5	11.4	122
SZ4516	16	31.2	8.0	700	0.25	0.5	12.2	114
SZ4517	17	29.4	9.0	750	0.25	0.5	13.0	107
SZ4518	18	27.8	10	750	0.25	0.5	13.7	100
SZ4519	19	26.3	11	750	0.25	0.5	14.4	95
SZ4520	20	25.0	11	750	0.25	0.5	15.2	90
SZ4522	22	22.8	12	750	0.25	0.5	16.7	82
SZ4524	24	20.8	13	750	0.25	0.5	18.2	76
SZ4527	27	18.5	18	750	0.25	0.5	20.6	68
SZ4530	30	16.6	20	1000	0.25	0.5	22.5	60
SZ4533	33	15.1	23	1000	0.25	0.5	25.1	55
SZ4536	36	13.9	25	1000	0.25	0.5	27.4	50
SZ4539	39	12.8	30	1000	0.25	0.5	29.7	47
SZ4543	43	11.6	35	1500	0.25	0.5	32.7	43
SZ4547	47	10.6	40	1500	0.25	0.5	35.8	39
SZ4551	51	9.8	48	1500	0.25	0.5	38.8	36
SZ4556	56	9.0	55	2000	0.25	0.5	42.6	32
SZ4562	62	8.1	60	2000	0.25	0.5	47.1	29
SZ4568	68	7.4	75	2000	0.25	0.5	51.7	27
SZ4575	75	6.7	90	2000	0.25	0.5	56.0	24
SZ4582	82	6.1	100	3000	0.25	0.5	62.2	22
SZ4591	91	5.5	125	3000	0.25	0.5	69.2	20
SZ45B0	100	5.0	175	3000	0.25	0.5	76.0	18
SZ45B1	110	4.5	250	4000	0.25	0.5	83.6	17
SZ45B2	120	4.2	325	4500	0.25	0.5	91.2	15
SZ45B3	130	3.8	400	5000	0.25	0.5	98.8	14
SZ45B4	140	3.6	500	5500	0.25	0.5	106.4	13
SZ45B5	150	3.3	575	6000	0.25	0.5	114.0	12
SZ45B6	160	3.1	650	6500	0.25	0.5	121.6	11
SZ45B7	170	2.9	675	7000	0.25	0.5	130.4	11
SZ45B8	180	2.8	725	7000	0.25	0.5	136.8	10
SZ45B9	190	2.6	825	8000	0.25	0.5	144.8	10
SZ45D0	200	2.5	900	8000	0.25	0.5	152.0	9.0

Notes :

Tolerance and type number designation:

The type numbers listed have a standard tolerance on the nominal zener voltage of +/-5%.