SZ553J - SZ55D0

SURFACE MOUNT SILICON ZENER DIODES

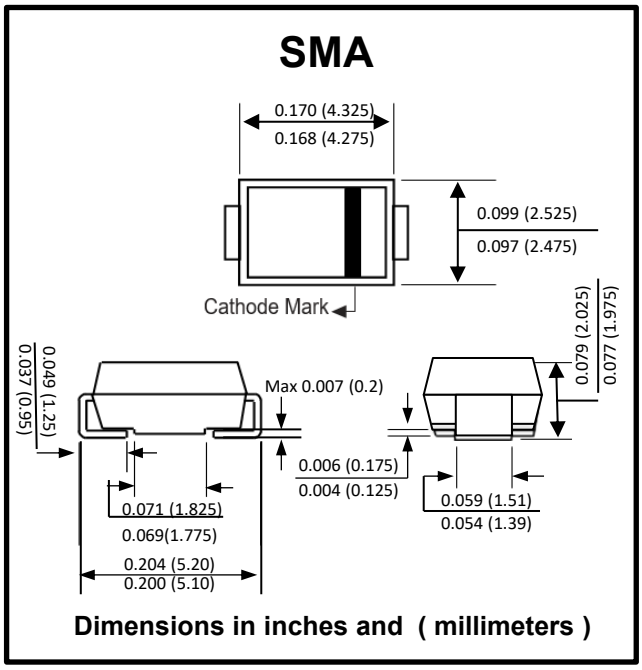
V_Z : 3.9 - 200 Volts
P_D : 3 Watts

FEATURES :

* Complete Voltage Range 3.9 to 200 Volts
* High peak reverse power dissipation
* High reliability
* Low leakage current
* Pb / RoHS Free

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



MAXIMUM RATINGS

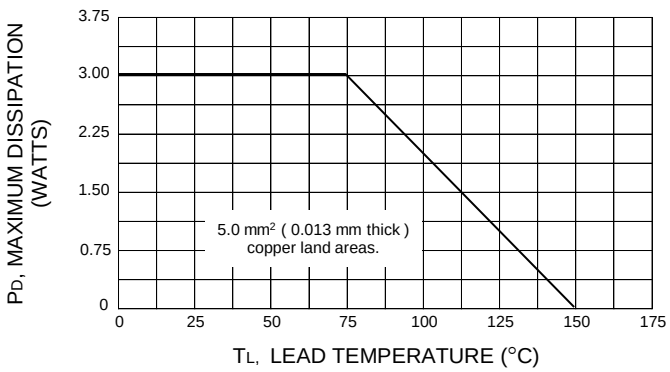
Rating at 25 °C ambient temperature unless otherwise specified

Rating	Symbol	Value	Unit
DC Power Dissipation at T_L = 75 °C (Note1)	P_D	3.0	W
Maximum Forward Voltage at I_F = 200 mA	V_F	1.5	V
Junction Temperature Range	T_J	- 55 to + 150	°C
Storage Temperature Range	Ts	- 55 to + 150	°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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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
	V_Z @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R @	V_R	I_{ZM}
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
SZ553J	3.9	192	4.5	400	1.0	80	1.0	630
SZ554D	4.3	174	4.5	400	1.0	50	1.0	590
SZ554H	4.7	160	4.0	500	1.0	50	1.0	550
SZ555B	5.1	147	3.5	550	1.0	50	1.0	520
SZ555G	5.6	134	2.5	600	1.0	50	2.0	480
SZ556C	6.2	121	1.5	700	1.0	50	3.0	435
SZ556I	6.8	110	2.0	700	1.0	50	4.0	393
SZ557F	7.5	100	2.0	700	0.5	50	5.0	360
SZ558C	8.2	91	2.3	700	0.5	50	6.0	330
SZ559B	9.1	82	2.5	700	0.5	50	7.0	297
SZ5510	10	75	3.5	700	0.25	50	7.6	270
SZ5511	11	68	4.0	700	0.25	50	8.4	225
SZ5512	12	63	4.5	700	0.25	1.0	9.1	246
SZ5513	13	58	4.5	700	0.25	0.5	9.9	208
SZ5514	14	53	5.0	700	0.25	0.5	10.6	193
SZ5515	15	50	5.5	700	0.25	0.5	11.4	180
SZ5516	16	47	5.5	700	0.25	0.5	12.2	169
SZ5517	17	44	6.0	750	0.25	0.5	13.0	159
SZ5518	18	42	6.0	750	0.25	0.5	13.7	150
SZ5519	19	40	7.0	750	0.25	0.5	14.4	142
SZ5520	20	37	7.0	750	0.25	0.5	15.2	135
SZ5522	22	34	8.0	750	0.25	0.5	16.7	123
SZ5524	24	31	9.0	750	0.25	0.5	18.2	112
SZ5527	27	28	10	750	0.25	0.5	20.6	100
SZ5528	28	27	12	750	0.25	0.5	21.0	96
SZ5530	30	25	16	1000	0.25	0.5	22.5	90
SZ5533	33	23	20	1000	0.25	0.5	25.1	82
SZ5536	36	21	22	1000	0.25	0.5	27.4	75
SZ5539	39	19	28	1000	0.25	0.5	29.7	69
SZ5543	43	17	33	1500	0.25	0.5	32.7	63
SZ5547	47	16	38	1500	0.25	0.5	35.6	57
SZ5551	51	15	45	1500	0.25	0.5	38.8	53
SZ5556	56	13	50	2000	0.25	0.5	42.6	48
SZ5562	62	12	55	2000	0.25	0.5	47.1	44
SZ5568	68	11	70	2000	0.25	0.5	51.7	40
SZ5575	75	10	85	2000	0.25	0.5	56.0	36
SZ5582	82	9.1	95	3000	0.25	0.5	62.2	33
SZ5591	91	8.2	115	3000	0.25	0.5	69.2	30
SZ55B0	100	7.5	160	3000	0.25	0.5	76.0	27
SZ55B1	110	6.8	225	4000	0.25	0.5	83.6	25
SZ55B2	120	6.3	300	4500	0.25	0.5	91.2	22
SZ55B3	130	5.8	375	5000	0.25	0.5	98.8	21
SZ55B4	140	5.3	475	5000	0.25	0.5	106.4	19
SZ55B5	150	5.0	550	6000	0.25	0.5	114.0	18
SZ55B6	160	4.7	625	6500	0.25	0.5	121.6	17
SZ55B7	170	4.4	650	7000	0.25	0.5	130.4	16
SZ55B8	180	4.2	700	7000	0.25	0.5	136.8	15
SZ55B9	190	4.0	800	8000	0.25	0.5	144.8	14
SZ55D0	200	3.7	875	8000	0.25	0.5	152.0	13

Notes :

(1) The type number listed have a standard tolerance on the nominal zener voltage of ± 5.0%, altered the fourth number of type from " 5 " for ± 5.0% tolerance to be " 0 " for ± 10% tolerance.

(2) " SZ " will be omitted in marking on the diode.

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RATING AND CHARACTERISTIC CURVES (SZ553J - SZ55D0)

Fig. 2 Maximum Surge Power

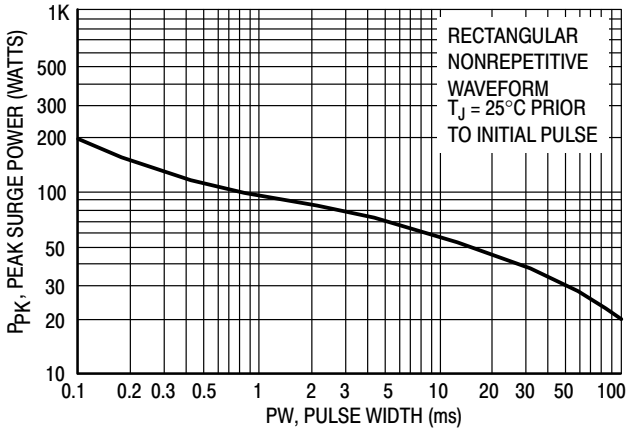


Fig. 3 Zener Voltage − 3.9 VoltsTo 12 Volts

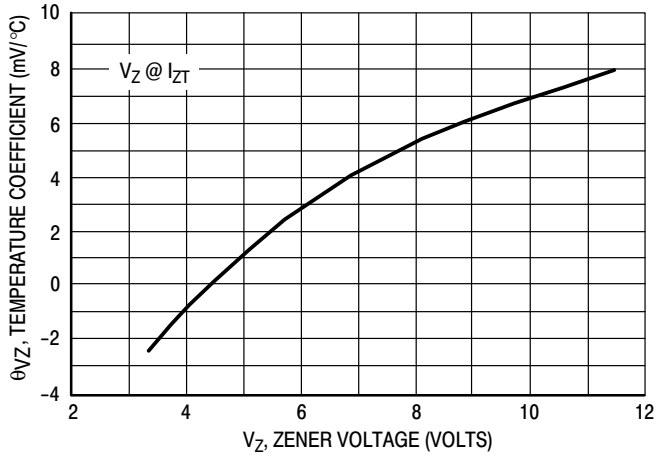


Fig. 4 Zener Voltage − 14 To 200 Volts

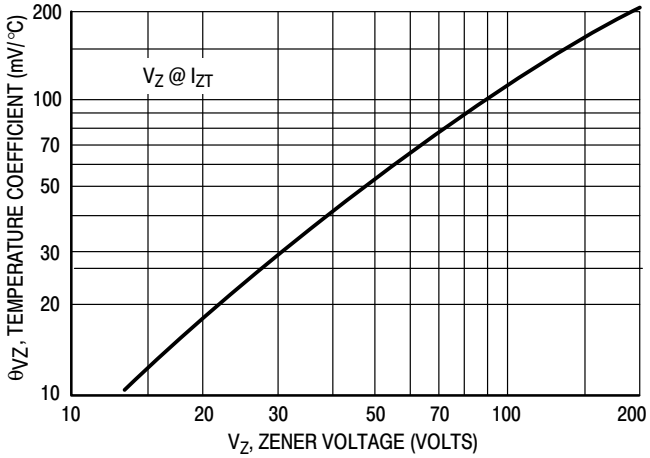


Figure 5. V_Z = 3.9 To 10 Volts

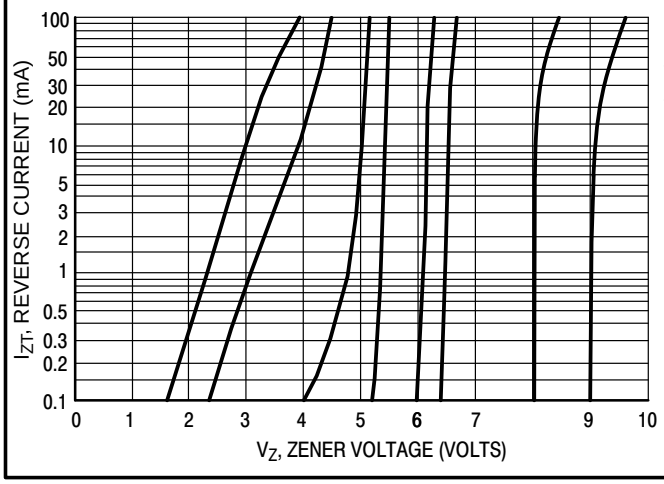
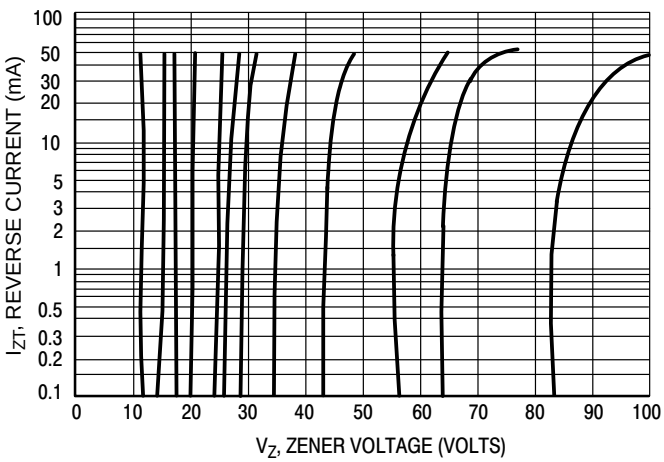


Figure 6. V_Z = 12 To 82 Volts



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RATING AND CHARACTERISTIC CURVES (SZ553J - SZ55D0)

Fig. 7 Effect of Zener Voltage

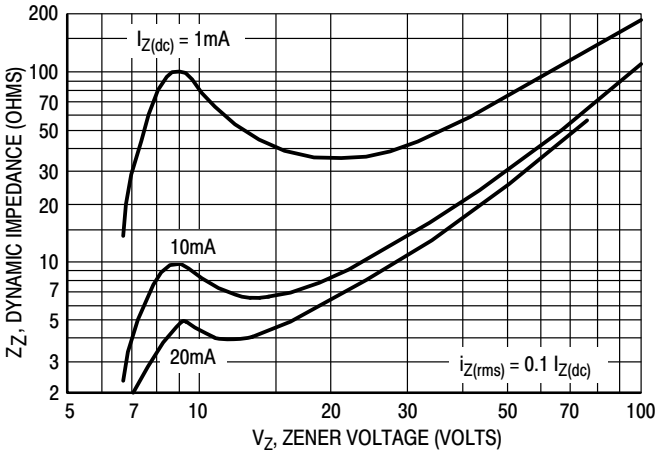
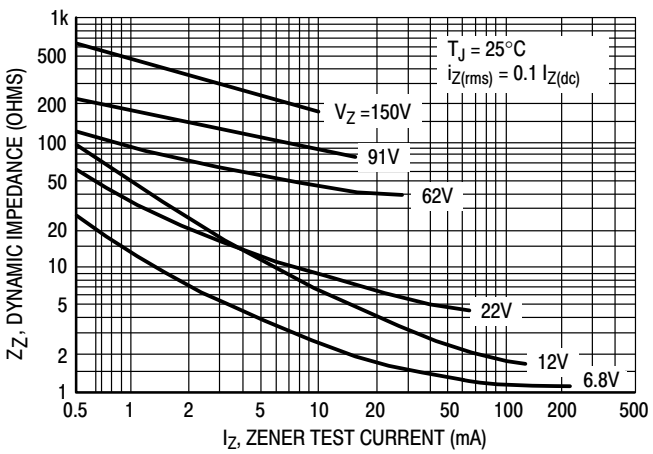


Fig. 8 Effect of Zener Current



Rating and Typical Characteristic Curves (T_A = 25°C)

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