SZ655B - SZ65D0

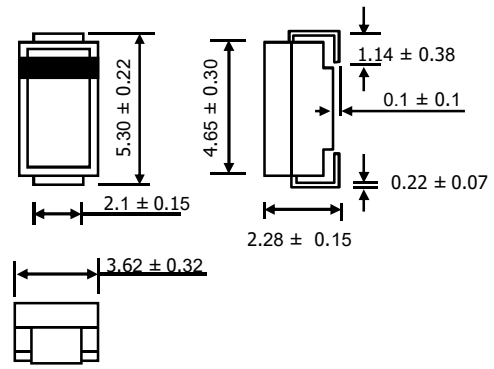
SURFACE MOUNT SILICON ZENER DIODES

V_Z : 5.1 - 200 Volts
P_D : 5 Watts

FEATURES :
* Complete Voltage Range 5.1 to 200 Volts
* High peak reverse power dissipation
* High reliability
* Low leakage current
* Nonsensitive to ESD
* Pb / RoHS Free

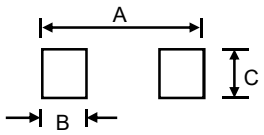
MECHANICAL DATA
* Case : SMB Molded plastic
* Epoxy : UL94V-0 rate flame retardant
* Lead : Lead Formed for Surface Mount
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 0.108 gram

SMB (DO-214AA)



Dimensions in millimeters

PAD LAYOUT



	INC.	mm.
A	0.260	6.60
B	0.085	2.16
C	0.110	2.79

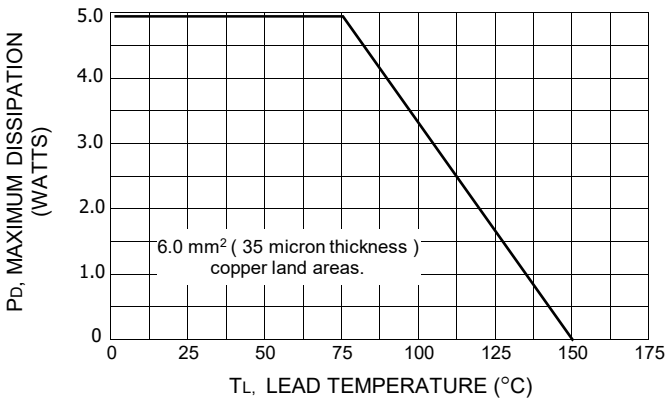
MAXIMUM RATINGS
Rating at 25 °C ambient temperature unless otherwise specified

Rating	Symbol	Value	Unit
DC Power Dissipation at T_L = 75 °C (Note1)	P_D	5.0	W
Maximum Forward Voltage at I_F = 1.0 A	V_F	1.2	V
Operating Junction Temperature Range	T_J	- 55 to + 150	°C
Storage Temperature Range	T_{STG}	- 55 to + 150	°C

Note :

(1) T_L = Lead temperature at 6.0 mm^2 (35 micron thickness) 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	Maximum Surge Current	Maximum Temperature Co-efficient of V_{BR}
	V_Z @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R @	V_R	I_{ZM}	I_{ZSM}	
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)	(A)	(% / °C)
SZ655B	5.1	240	1.5	400	1.0	1.0	1.0	930	14.4	0.047
SZ655G	5.6	220	1.0	400	1.0	1.0	2.0	865	13.4	0.050
SZ656A	6.0	200	1.0	300	1.0	1.0	3.0	790	12.7	0.053
SZ656C	6.2	200	1.0	200	1.0	1.0	3.0	765	12.4	0.054
SZ656I	6.8	175	1.0	200	1.0	10	5.2	700	11.5	0.057
SZ657F	7.5	175	1.5	200	1.0	10	5.7	630	10.7	0.061
SZ658C	8.2	150	1.5	200	1.0	10	6.2	580	10.0	0.065
SZ658H	8.7	150	2.0	200	1.0	10	6.6	545	9.5	0.068
SZ659B	9.1	150	2.0	150	1.0	7.5	6.9	520	9.2	0.068
SZ6510	10	125	2.0	125	1.0	5.0	7.6	475	8.6	0.073
SZ6511	11	125	2.5	125	1.0	5.0	8.4	430	8.0	0.075
SZ6512	12	100	2.5	125	1.0	2.0	9.1	395	7.5	0.078
SZ6513	13	100	2.5	100	1.0	1.0	9.9	365	7.0	0.081
SZ6514	14	100	2.5	75	1.0	1.0	10.6	340	6.7	0.082
SZ6515	15	75	2.5	75	1.0	1.0	11.5	315	6.3	0.084
SZ6516	16	75	2.5	75	1.0	1.0	12.2	295	6.0	0.086
SZ6517	17	70	2.5	75	1.0	0.5	12.9	280	5.8	0.088
SZ6518	18	65	2.5	75	1.0	0.5	13.7	265	5.5	0.088
SZ6519	19	65	3.0	75	1.0	0.5	14.4	250	5.3	0.090
SZ6520	20	65	3.0	75	1.0	0.5	15.2	237	5.1	0.090
SZ6522	22	50	3.5	75	1.0	0.5	16.7	216	4.7	0.092
SZ6524	24	50	3.5	100	1.0	0.5	18.2	198	4.4	0.094
SZ6525	25	50	4.0	110	1.0	0.5	19.0	190	4.3	0.093
SZ6527	27	50	5.0	120	1.0	0.5	20.6	176	4.1	0.096
SZ6528	28	50	6.0	130	1.0	0.5	21.2	170	3.9	0.096
SZ6530	30	40	8.0	140	1.0	0.5	22.8	158	3.7	0.097
SZ6533	33	40	10	150	1.0	0.5	25.1	144	3.5	0.098
SZ6536	36	30	11	160	1.0	0.5	27.4	132	3.3	0.099
SZ6539	39	30	14	170	1.0	0.5	29.7	122	3.1	0.100
SZ6543	43	30	20	190	1.0	0.5	32.7	110	2.8	0.101
SZ6547	47	25	25	210	1.0	0.5	35.8	100	2.7	0.101
SZ6551	51	25	27	230	1.0	0.5	38.8	93.0	2.5	0.102
SZ6556	56	20	35	280	1.0	0.5	42.6	86.0	2.3	0.103
SZ6560	60	20	40	350	1.0	0.5	45.5	79.0	2.2	0.104
SZ6562	62	20	42	400	1.0	0.5	47.1	76.0	2.1	0.104
SZ6568	68	20	44	500	1.0	0.5	51.7	70.0	2.0	0.104
SZ6575	75	20	45	620	1.0	0.5	56.0	63.0	1.9	0.105
SZ6582	82	15	65	720	1.0	0.5	62.2	58.0	1.8	0.105
SZ6587	87	15	75	760	1.0	0.5	66.0	54.5	1.7	0.105
SZ6591	91	15	75	760	1.0	0.5	69.2	52.5	1.6	0.106
SZ65B0	100	12	90	800	1.0	0.5	76.0	47.5	1.5	0.106
SZ65B1	110	12	125	1000	1.0	0.5	83.6	43.0	1.4	0.107
SZ65B2	120	10	170	1150	1.0	0.5	91.2	39.5	1.3	0.107
SZ65B3	130	10	190	1250	1.0	0.5	98.8	36.6	1.2	0.107
SZ65B4	140	8.0	230	1500	1.0	0.5	106	34.0	1.2	0.108
SZ65B5	150	8.0	330	1500	1.0	0.5	114	31.6	1.1	0.108
SZ65B6	160	8.0	350	1650	1.0	0.5	122	29.4	1.1	0.108
SZ65B7	170	8.0	380	1750	1.0	0.5	129	28.0	1.0	0.108
SZ65B8	180	5.0	430	1750	1.0	0.5	137	26.4	1.0	0.108
SZ65B9	190	5.0	450	1850	1.0	0.5	144	25.0	0.9	0.108
SZ65D0	200	5.0	480	1850	1.0	0.5	152	23.6	0.9	0.108

Notes:

(1) The type number listed have a standard tolerance on the nominal zener voltage of ± 5%, altered the fourth number of type from " 5 " for ± 5% 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 (SZ655B - SZ65D0)

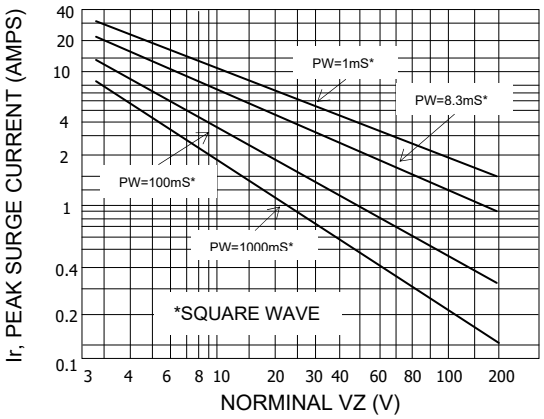


FIG. 1 - Maximum Non-Repetitive Surge Current versus norminal Zener Voltage

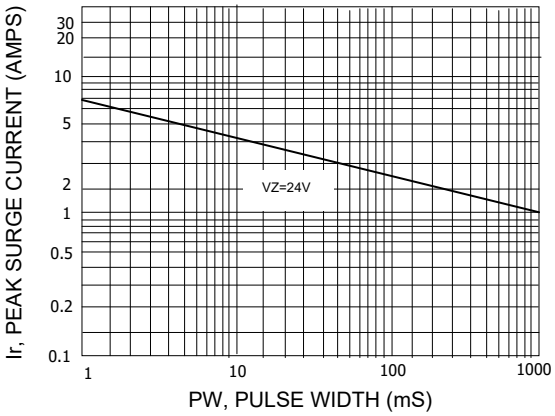


FIG. 2 - Peak Surge Current versus Pulse Width

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