

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Glass passivated chip
- Low leakage
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- Lead (Pb)-free component
- For use in stabilizing and clipping circuits with high power rating

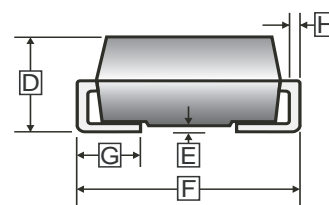
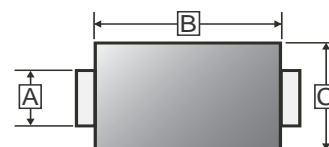
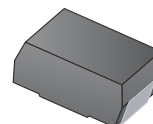
MECHANICAL DATA

- Case : SMB
- Epoxy : UL 94V-0 rate flame retardant
- Polarity : Laser band denotes cathode end
- Weight : 0.095 grams (Approximately)

PACKAGE INFORMATION

Package	MPQ	LeaderSize
SMB	3K	13' inch

SMB



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.91	2.20	E	-	0.203
B	4.06	4.70	F	5.08	5.59
C	3.30	3.94	G	0.76	1.52
D	2.13	2.44	H	0.15	0.305

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNITS
DC Power Dissipation at T _L =50°C (Note 1)	P _D	1.5	W
Maximum Forward Voltage at I _F = 200mA	V _F	1.5	V
Junction Temperature Range	T _J	-55 ~ + 150	°C
Storage Temperature Range	T _{STG}	-55 ~ + 150	°C

Notes :

1. T_L = Lead temperature at 3/8" (9.5mm) from body.

ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.

PART NUMBER	Nominal Zener Voltage		Max. Zener Impedance				Max. Reverse Leakage Current		Max. DC Zener Current
	$V_Z @ I_{ZT}$		$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$		I_{ZM}
	Nom.V	mA	Ω	mA	Ω	mA	μA	V	mA
SMB5920B	6.2	60.5	2.0	60.5	200	1.00	5.0	4.0	120
SMB5921B	6.8	55.1	2.5	55.1	200	1.00	5.0	5.2	220
SMB5922B	7.5	50.0	3.0	50.0	400	0.50	5.0	6.0	200
SMB5923B	8.2	45.7	3.5	45.7	400	0.50	5.0	6.5	182
SMB5924B	9.1	41.2	4.0	41.2	500	0.50	5.0	7.0	164
SMB5925B	10.0	37.5	4.5	37.5	500	0.25	5.0	8.0	150
SMB5926B	11.0	34.1	5.5	34.1	550	0.25	5.0	8.4	136
SMB5927B	12.0	31.2	6.5	31.2	550	0.25	1.0	9.1	125
SMB5928B	13.0	28.8	7.0	28.8	550	0.25	1.0	9.9	115
SMB5929B	15.0	25.0	9.0	25.0	600	0.25	1.0	11.4	100
SMB5930B	16.0	23.4	10	23.4	600	0.25	1.0	12.2	93
SMB5931B	18.0	20.8	12	20.8	650	0.25	1.0	13.7	83
SMB5932B	20.0	18.7	14	18.7	650	0.25	1.0	15.2	75
SMB5933B	22.0	17.0	18	17.0	650	0.25	1.0	16.7	68
SMB5934B	24.0	15.6	19	15.6	700	0.25	1.0	18.2	62
SMB5935B	27.0	13.9	23	13.9	700	0.25	1.0	20.6	55
SMB5936B	30.0	12.5	26	12.5	750	0.25	1.0	22.8	50
SMB5937B	33.0	11.4	33	11.4	800	0.25	1.0	25.1	45
SMB5938B	36.0	10.4	38	10.4	850	0.25	1.0	27.4	41
SMB5939B	39.0	9.6	45	9.6	900	0.25	1.0	29.7	38
SMB5940B	43.0	8.7	53	8.7	950	0.25	1.0	32.7	34
SMB5941B	47.0	8.0	67	8.0	1000	0.25	1.0	35.8	31
SMB5942B	51.0	7.3	70	7.3	1100	0.25	1.0	38.8	29
SMB5943B	56.0	6.7	86	6.7	1300	0.25	1.0	42.6	26
SMB5944B	62.0	6.0	100	6.0	1500	0.25	1.0	47.1	24
SMB5945B	68.0	5.5	120	5.5	1700	0.25	1.0	51.7	22
SMB5946B	75.0	5.0	140	5.0	2000	0.25	1.0	56.0	20
SMB5947B	82.0	4.6	160	4.6	2500	0.25	1.0	62.2	18
SMB5948B	91.0	4.1	200	4.1	3000	0.25	1.0	69.2	16
SMB5949B	100.0	3.7	250	3.7	3100	0.25	1.0	76.0	15
SMB5950B	110.0	3.4	300	3.4	4000	0.25	1.0	83.6	6.5
SMB5951B	120.0	3.1	380	3.1	4500	0.25	1.0	91.2	6.0
SMB5952B	130.0	2.9	450	2.9	5000	0.25	1.0	98.8	5.5
SMB5953B	150.0	2.5	600	2.5	6000	0.25	1.0	114.0	5.0
SMB5954B	160.0	2.3	700	2.3	6500	0.25	1.0	121.6	4.5
SMB5955B	180.0	2.1	900	2.1	7000	0.25	1.0	136.8	4.0
SMB5956B	200.0	1.9	1900	1.9	9990	0.25	1.0	152.0	3.5

NOTES:

1. The type number listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$.
2. The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC Method.

RATINGS AND CHARACTERISTIC CURVES

Fig. 1 - Power Temperature Derating Curve

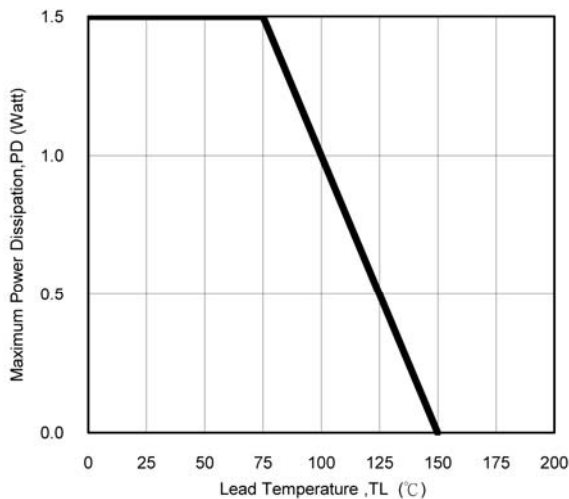


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

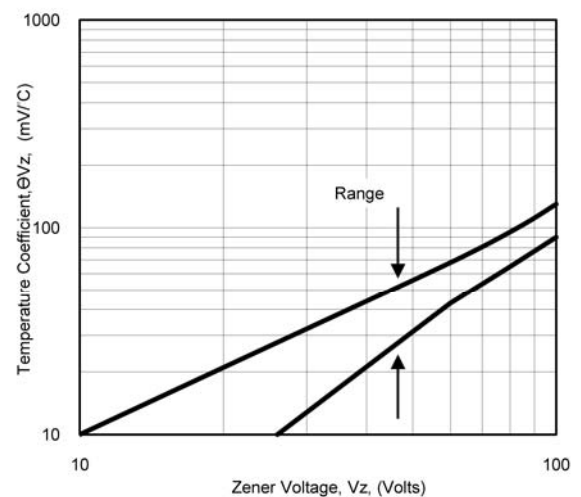


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

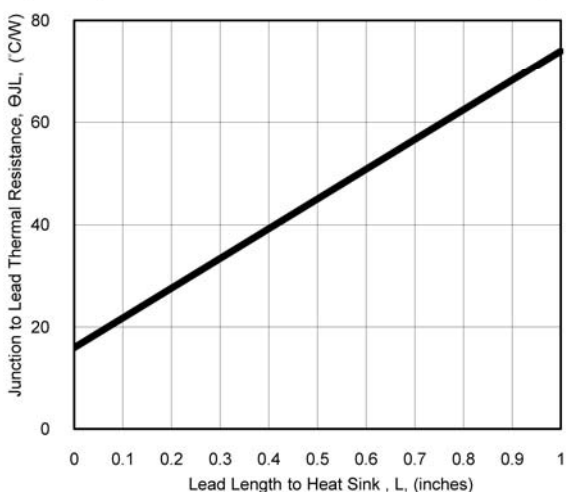


Fig. 4 - Maximum Surge Power

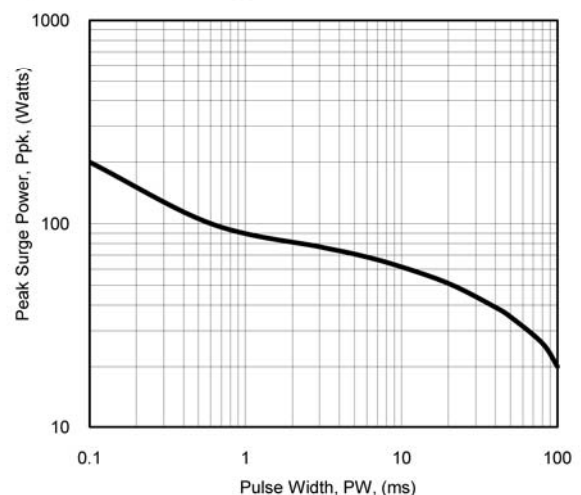


Fig. 5 - Typical Thermal Response L , Lead Length=3/8inch

