

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

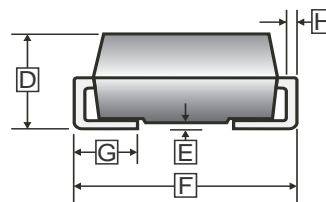
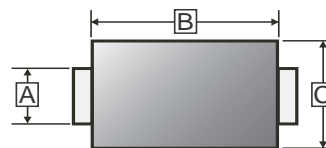
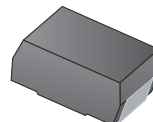
## MECHANICAL DATA

- Case : SMB
- Epoxy : UL 94V-0 rate flame retardant
- Polarity : Laser band denotes cathode end
- Weight : 0.062 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<sub>A</sub>=25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNITS
DC Power Dissipation at TL=50°C (Note 1)	P <sub>D</sub>	2.0	W
Maximum Forward Voltage at I <sub>F</sub> = 200mA	V <sub>F</sub>	1.5	V
Junction Temperature Range	T <sub>J</sub>	-55 ~ + 150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~ + 150	°C

Notes :

1. TL = 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	$\Omega$	mA	$\Omega$	mA	$\mu A$	V	mA
SMB2EZ6.2D5	6.2	80.5	1.5	80.5	700	1.0	5.0	3.0	292
SMB2EZ6.8D5	6.8	73.5	2.0	73.5	700	1.0	5.0	4.0	266
SMB2EZ7.5D5	7.5	66.5	2.0	66.5	700	0.5	5.0	5.0	242
SMB2EZ8.2D5	8.2	61	2.3	61.0	700	0.5	5.0	6.0	220
SMB2EZ9.1D5	9.1	55	2.5	55.0	700	0.5	3.0	7.0	200
SMB2EZ10D5	10.0	50	3.5	50.0	700	0.25	3.0	7.6	182
SMB2EZ11D5	11.0	45.5	4.0	45.5	700	0.25	1.0	8.4	166
SMB2EZ12D5	12.0	41.5	4.5	41.5	700	0.25	1.0	9.1	152
SMB2EZ13D5	13.0	38.5	5.0	38.5	700	0.25	0.5	9.9	138
SMB2EZ14D5	14.0	35.7	5.5	35.7	700	0.25	0.5	10.6	130
SMB2EZ15D5	15.0	33.4	7.0	33.4	700	0.25	0.5	11.4	122
SMB2EZ16D5	16.0	31.2	8.0	31.2	700	0.25	0.5	12.2	114
SMB2EZ17D5	17.0	29.4	9.0	29.4	750	0.25	0.5	13.0	107
SMB2EZ18D5	18.0	27.8	10.0	27.8	750	0.25	0.5	13.7	100
SMB2EZ19D5	19.0	26.3	11.0	26.3	750	0.25	0.5	14.4	95
SMB2EZ20D5	20.0	25	11.0	25.0	750	0.25	0.5	15.2	90
SMB2EZ22D5	22.0	22.8	12.0	22.8	750	0.25	0.5	16.7	82
SMB2EZ24D5	24.0	20.8	13.0	20.8	750	0.25	0.5	18.2	76
SMB2EZ27D5	27.0	18.5	18.0	18.5	750	0.25	0.5	20.6	68
SMB2EZ30D5	30.0	16.6	20	16.6	1000	0.25	0.5	22.5	60
SMB2EZ33D5	33.0	15.1	23	15.1	1000	0.25	0.5	25.1	55
SMB2EZ36D5	36.0	13.9	25	13.9	1000	0.25	0.5	27.4	50
SMB2EZ39D5	39.0	12.8	30	12.8	1000	0.25	0.5	29.7	47
SMB2EZ43D5	43.0	11.6	35	11.6	1500	0.25	0.5	32.7	43
SMB2EZ47D5	47.0	10.6	40	10.6	1500	0.25	0.5	35.8	39
SMB2EZ51D5	51.0	9.8	48	9.8	1500	0.25	0.5	38.8	36
SMB2EZ56D5	56.0	9.0	55	9.0	2000	0.25	0.5	42.6	32
SMB2EZ62D5	62.0	8.1	60	8.1	2000	0.25	0.5	47.1	29
SMB2EZ68D5	68.0	7.4	75	7.4	2000	0.25	0.5	51.7	27
SMB2EZ75D5	75.0	6.7	90	6.7	2000	0.25	0.5	56.0	24
SMB2EZ82D5	82.0	6.1	100	6.1	3000	0.25	0.5	62.2	22
SMB2EZ91D5	91.0	5.5	125	5.5	3000	0.25	0.5	69.2	20
SMB2EZ100D5	100.0	5.0	175	5.0	3000	0.25	0.5	76.0	18
SMB2EZ110D5	110.0	4.5	250	4.5	4000	0.25	0.5	83.6	17
SMB2EZ120D5	120.0	4.2	325	4.2	4500	0.25	0.5	91.2	15
SMB2EZ130D5	130.0	3.8	400	3.8	5000	0.25	0.5	98.8	14
SMB2EZ140D5	140.0	3.6	500	3.6	5500	0.25	0.5	106.4	13
SMB2EZ150D5	150.0	3.3	575	3.3	6000	0.25	0.5	114.0	12
SMB2EZ160D5	160.0	3.1	650	3.1	6500	0.25	0.5	121.6	11
SMB2EZ170D5	170.0	2.9	675	2.9	7000	0.25	0.5	130.4	11

PART NUMBER	Nominal Zener Voltage		Max. Zener Impedance				Max. Reverse Leakage Current		Max. DC Zener Current
	V <sub>Z</sub> @ I <sub>ZT</sub>		Z <sub>ZT</sub> @ I <sub>ZT</sub>		Z <sub>ZK</sub> @ I <sub>ZK</sub>		I <sub>R</sub> @ V <sub>R</sub>		I <sub>ZM</sub>
	Nom.V	mA	Ω	mA	Ω	mA	uA	V	mA
SMB2EZ180D5	180	2.8	725	2.8	7000	0.25	0.5	136.8	10
SMB2EZ190D5	190	2.6	825	2.6	8000	0.25	0.5	144.8	10
SMB2EZ200D5	200	2.5	1900	2.5	9990	0.25	0.5	152.0	9
SMB2EZ220D5	220	2.0	2000	2.0	8500	0.25	0.5	167.0	8
SMB2EZ270D5	270	1.6	2200	1.6	8500	0.25	0.5	205.0	6.7
SMB2EZ300D5	300	1.5	2200	1.5	9000	0.25	0.5	228.0	5.9
SMB2EZ330D5	330	1.4	2300	1.4	9000	0.25	0.5	250.0	5.4

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<sub>ZT</sub> per JEDEC Method.

**RATINGS AND CHARACTERISTIC CURVES**

Fig. 1 - Power Temperature Derating Curve

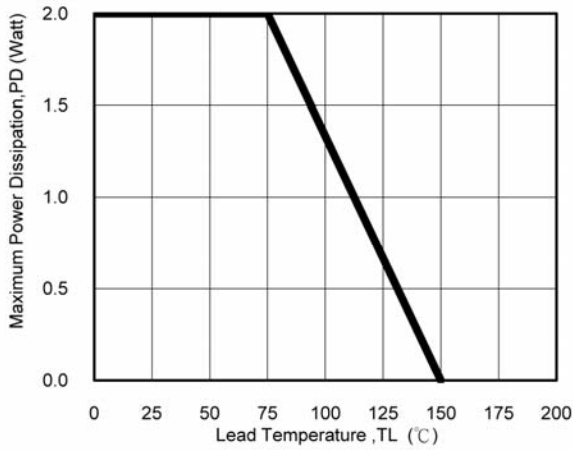


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

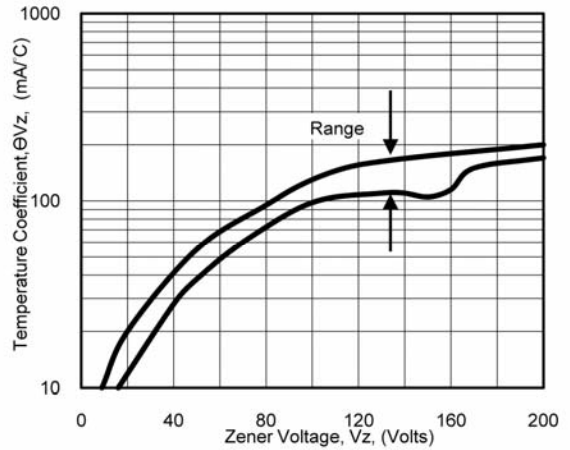


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

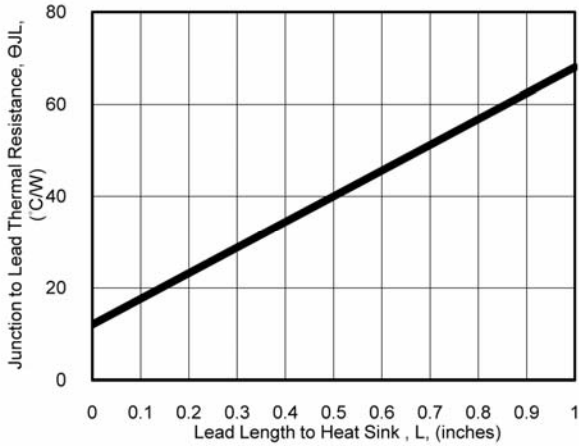


Fig. 4 - Maximum Surge Power

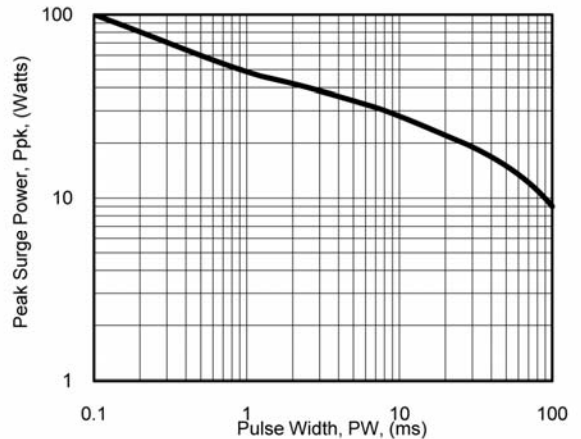


Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch

