Elektronische Bauelemente

SMA59xxB-C Series

Voltage 6.2V~200V

1.5 Watts Surface Mount Zener Diode

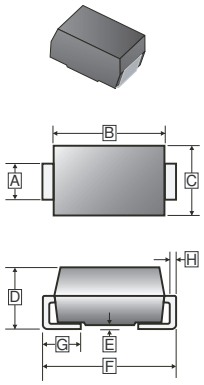
RoHS Compliant Product

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
- For use in stabilizing and clipping circuits with high power rating

SMA



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.23	1.65	E	-	0.3
B	3.99	4.75	F	4.70	5.28
C	2.30	2.90	G	0.75	1.52
D	1.90	2.62	H	0.15	0.31

MECHANICAL DATA

- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Laser band denotes cathode end

PACKAGE INFORMATION

Package	MPQ	Leader Size
SMA	5K	13 inch

ORDER INFORMATION

Part Number	Type
SMA59xxB-C Series	Lead (Pb)-free and Halogen-free

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Ratings	Unit
DC Power Dissipation @T_L=75℃ [1]	P_D	1.5	W
Maximum Forward Voltage @I_F=200mA	V_F	1.5	V
Junction Temperature Range	T_J	-55~150	℃
Storage Temperature Range	T_{STG}	-55~150	℃

Notes:

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

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ELECTRICAL CHARACTERISTICS (Rating 25℃ ambient temperature unless otherwise s pecified.)

Part Number	Nominal Zener Voltage		Max. Zener Impedance				Max. Reverse Leakage Current		Max. DC Zener
	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	uA	V	mA
SMA5920B-C	6.2	60.5	2	60.5	200	1	2.5	4	120
SMA5921B-C	6.8	55.1	2.5	55.1	200	1	2.5	5.2	220
SMA5922B-C	7.5	50	3	50	400	0.5	2.5	6	200
SMA5923B-C	8.2	45.7	3.5	45.7	400	0.5	2.5	6.5	182
SMA5924B-C	9.1	41.2	4	41.2	500	0.5	2.5	7	164
SMA5925B-C	10	37.5	4.5	37.5	500	0.25	2.5	8	150
SMA5926B-C	11	34.1	5.5	34.1	550	0.25	0.5	8.4	136
SMA5927B-C	12	31.2	6.5	31.2	550	0.25	0.5	9.1	125
SMA5928B-C	13	28.8	7	28.8	550	0.25	0.5	9.9	115
SMA5929B-C	15	25	9	25	600	0.25	0.5	11.4	100
SMA5930B-C	16	23.4	10	23.4	600	0.25	0.5	12.2	93
SMA5931B-C	18	20.8	12	20.8	650	0.25	0.5	13.7	83
SMA5932B-C	20	18.7	14	18.7	650	0.25	0.5	15.2	75
SMA5933B-C	22	17	18	17	650	0.25	0.5	16.7	68
SMA5934B-C	24	15.6	19	15.6	700	0.25	0.5	18.2	62
SMA5935B-C	27	13.9	23	13.9	700	0.25	0.5	20.6	55
SMA5936B-C	30	12.5	26	12.5	750	0.25	0.5	22.8	50
SMA5937B-C	33	11.4	33	11.4	800	0.25	0.5	25.1	45
SMA5938B-C	36	10.4	38	10.4	850	0.25	0.5	27.4	41
SMA5939B-C	39	9.6	45	9.6	900	0.25	0.5	29.7	38
SMA5940B-C	43	8.7	53	8.7	950	0.25	0.5	32.7	34
SMA5941B-C	47	8	67	8	1000	0.25	0.5	35.8	31
SMA5942B-C	51	7.3	70	7.3	1100	0.25	0.5	38.8	29
SMA5943B-C	56	6.7	86	6.7	1300	0.25	0.5	42.6	26
SMA5944B-C	62	6	100	6	1500	0.25	0.5	47.1	24
SMA5945B-C	68	5.5	120	5.5	1700	0.25	0.5	51.7	22
SMA5946B-C	75	5	140	5	2000	0.25	0.5	56	20
SMA5947B-C	82	4.6	160	4.6	2500	0.25	0.5	62.2	18
SMA5948B-C	91	4.1	200	4.1	3000	0.25	0.5	69.2	16
SMA5949B-C	100	3.7	250	3.7	3100	0.25	0.5	76	15
SMA5950B-C	110	3.4	300	3.4	4000	0.25	0.5	83.6	13
SMA5951B-C	120	3.1	380	3.1	4500	0.25	0.5	91.2	12
SMA5952B-C	130	2.9	450	2.9	5000	0.25	0.5	98.8	11
SMA5953B-C	150	2.5	600	2.5	6000	0.25	0.5	114	10
SMA5954B-C	160	2.3	700	2.3	6500	0.25	0.5	121.6	9
SMA5955B-C	180	2.1	900	2.1	7000	0.25	0.5	136.8	8
SMA5956B-C	200	1.9	1200	1.9	8000	0.25	0.5	152	3.5

Notes:

1. The type number listed have a standard tolerance on the nominal zener voltage of ±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.

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RATINGS AND CHARACTERISTIC CURVES

Fig. 1 - Power Temperature Derating Curve

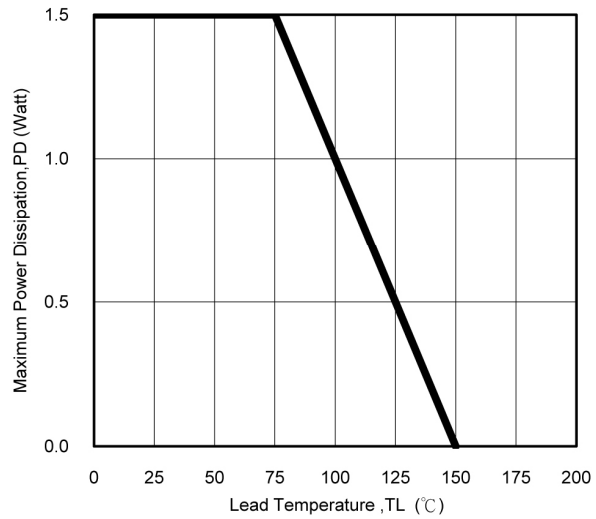

Fig. 2 - Temperature Coefficients v.s. Zener Voltage

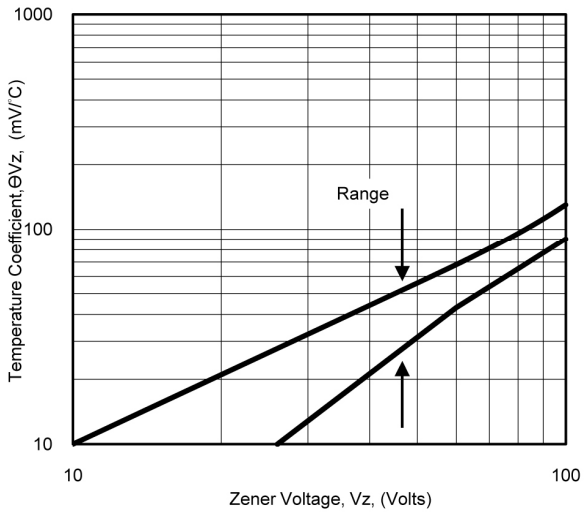

Fig. 3 - Typical Thermal Resistance v.s. Lead Length

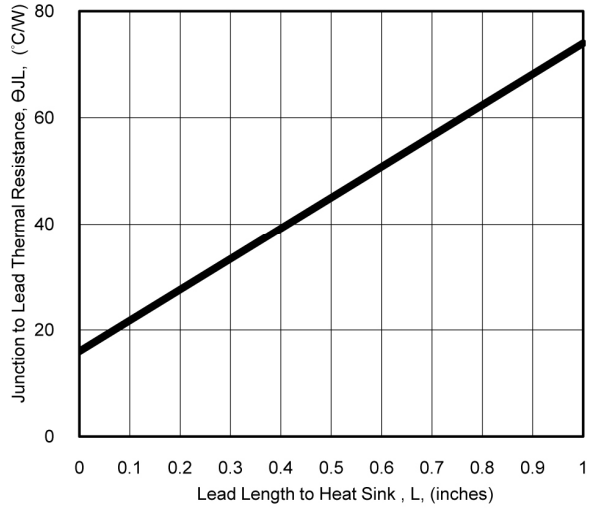

Fig. 4 - Maximum Surge Power

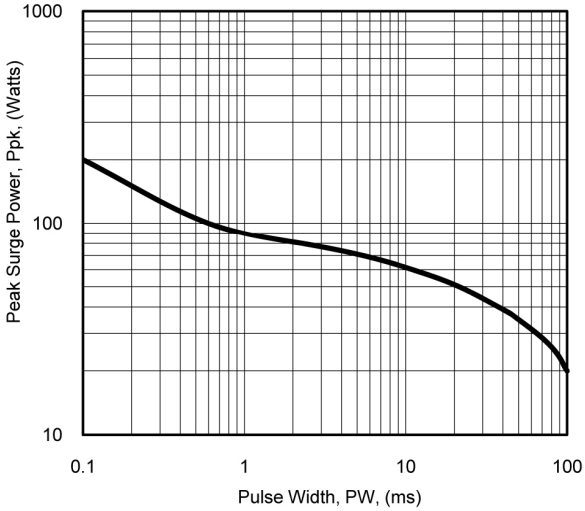

Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch