SMA5918B THRU SMA5956B

ZENER DIODES

REVERSE VOLTAGE: **5.1 TO 200 VOLTS**

POWER DISSIPATION: **1.5 WATTS**

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

· Suffix " H " indicated Halogen-free part, ex.SMA5918BH

MECHANICAL DATA

Case : Molded plastic DO-214(SMA)

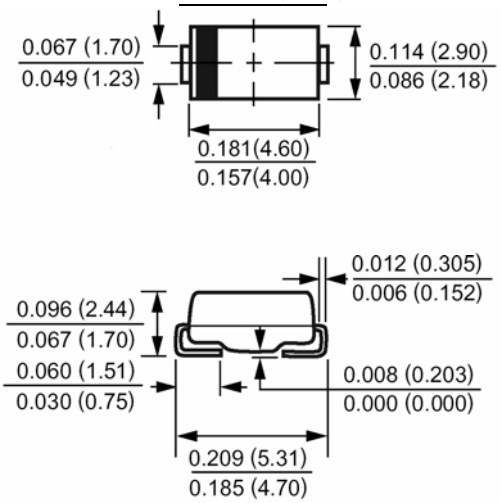
Epoxy : UL 94V-0 rate flame retardant

Lead : Solderable per MIL-STD-750, method 2026

Polarity : Color band denotes cathode end

Mounting position : Any

DO-214AC(SMA)



Dimensions in inches and (millimeters)

Absolute Maximum Ratings

Tamb = 25 °C, unless otherwise specified

Parameter	Symbol	Value	Unit
DC power dissipation at T_L=75℃ (1)	P_D	1.5	W
Maximum forward voltage at I_F=200mA	V_F	1.5	V
Junction Temperature Range	T_J	-55 to +150	℃
Storage Temperature Range	T_{STG}	-55 to +150	℃

Note:

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

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Electrical Characteristics

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	Omh	Omh	mA	uA	V	mA
SMA5918B	5.1	73.5	4	350	1.00	5.0	2.0	294
SMA5919B	5.6	66.9	2	250	1.00	5.0	3.0	267
SMA5920B	6.2	60.5	2	200	1.00	2.5	4.0	240
SMA5921B	6.8	55.1	2.5	200	1.00	2.5	5.2	220
SMA5922B	7.5	50.0	3	400	0.50	2.5	6.0	200
SMA5923B	8.2	45.7	3.5	400	0.50	2.5	6.5	182
SMA5924B	9.1	41.2	4	500	0.50	2.5	7.0	164
SMA5925B	10	37.5	4.5	500	0.25	2.5	8.0	150
SMA5926B	11	34.1	5.5	550	0.25	0.5	8.4	136
SMA5927B	12	31.2	6.5	550	0.25	0.5	9.1	125
SMA5928B	13	28.8	7	550	0.25	0.5	9.9	115
SMA5929B	15	25.0	9	600	0.25	0.5	11.4	100
SMA5930B	16	23.4	10	600	0.25	0.5	12.2	93
SMA5931B	18	20.8	12	650	0.25	0.5	13.7	83
SMA5932B	20	18.7	14	650	0.25	0.5	15.2	75
SMA5933B	22	17.0	17.5	650	0.25	0.5	16.7	68
SMA5934B	24	15.6	19	700	0.25	0.5	18.2	62
SMA5935B	27	13.9	23	700	0.25	0.5	20.6	55
SMA5936B	30	12.5	26	750	0.25	0.5	22.8	50
SMA5937B	33	11.4	33	800	0.25	0.5	25.1	45
SMA5938B	36	10.4	38	850	0.25	0.5	27.4	41
SMA5939B	39	9.6	45	900	0.25	0.5	29.7	38
SMA5940B	43	8.7	53	950	0.25	0.5	32.7	34
SMA5941B	47	8.0	67	1000	0.25	0.5	35.8	31
SMA5942B	51	7.3	70	1100	0.25	0.5	38.8	29
SMA5943B	56	6.7	86	1300	0.25	0.5	42.6	26
SMA5944B	62	6.0	100	1500	0.25	0.5	47.1	24
SMA5945B	68	5.5	120	1700	0.25	0.5	51.7	22
SMA5946B	75	5.0	140	2000	0.25	0.5	56.0	20
SMA5947B	82	4.6	160	2500	0.25	0.5	62.2	18
SMA5948B	91	4.1	200	3000	0.25	0.5	69.2	16
SMA5949B	100	3.7	250	3100	0.25	0.5	76.0	15
SMA5950B	110	3.4	300	4000	0.25	0.5	83.6	13
SMA5951B	120	3.1	380	4500	0.25	0.5	91.2	12
SMA5952B	130	2.9	450	5000	0.25	0.5	98.8	11
SMA5953B	150	2.5	600	6000	0.25	0.5	114.0	10
SMA5954B	160	2.3	700	6500	0.25	0.5	121.6	9
SMA5955B	180	2.1	900	7000	0.25	0.5	136.8	8
SMA5956B	200	1.9	1200	8000	0.25	0.5	152.0	7

(1) The type number listed have a standard tolerance on the nominal zener voltage of ± 5 %

(2) The revese surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per method.

RATINGS AND CHARACTERISTIC CURVES

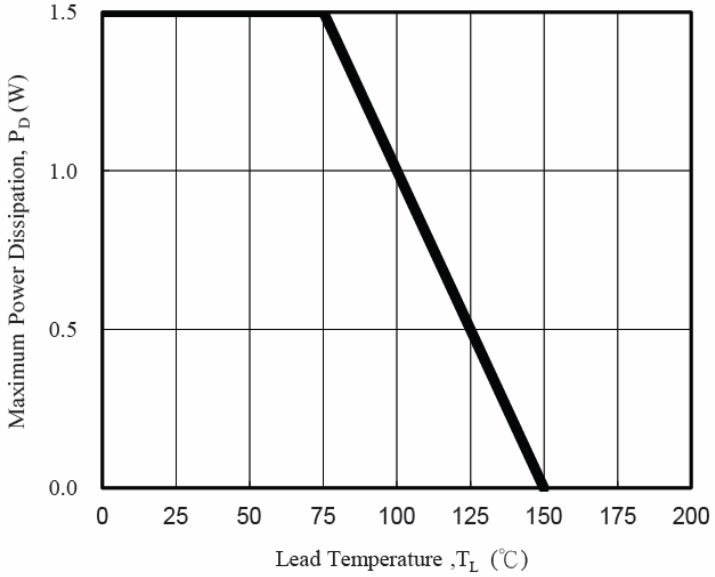

Fig. 1 - Power Temperature Derating Curve

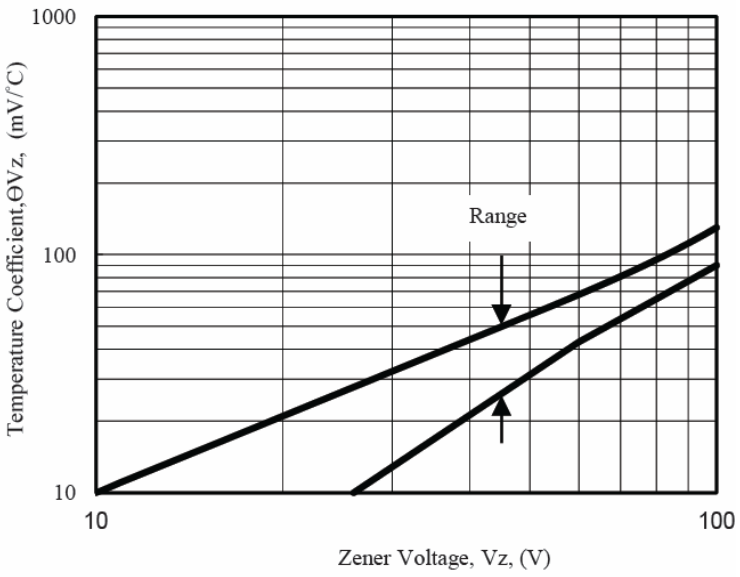

Fig. 2 - Temperature Coefficients v.s. Zener Voltage

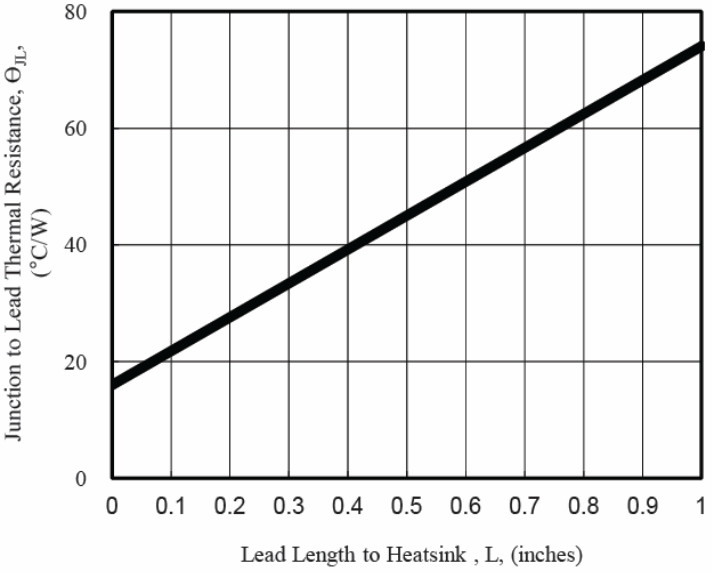

Fig. 3 - Typical Thermal Resistance v.s. Lead Length

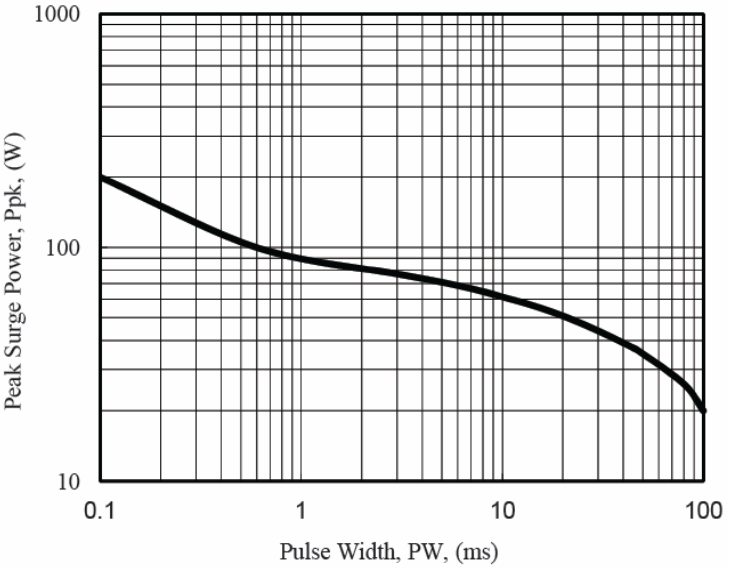

Fig. 4 - Maximum Surge Power

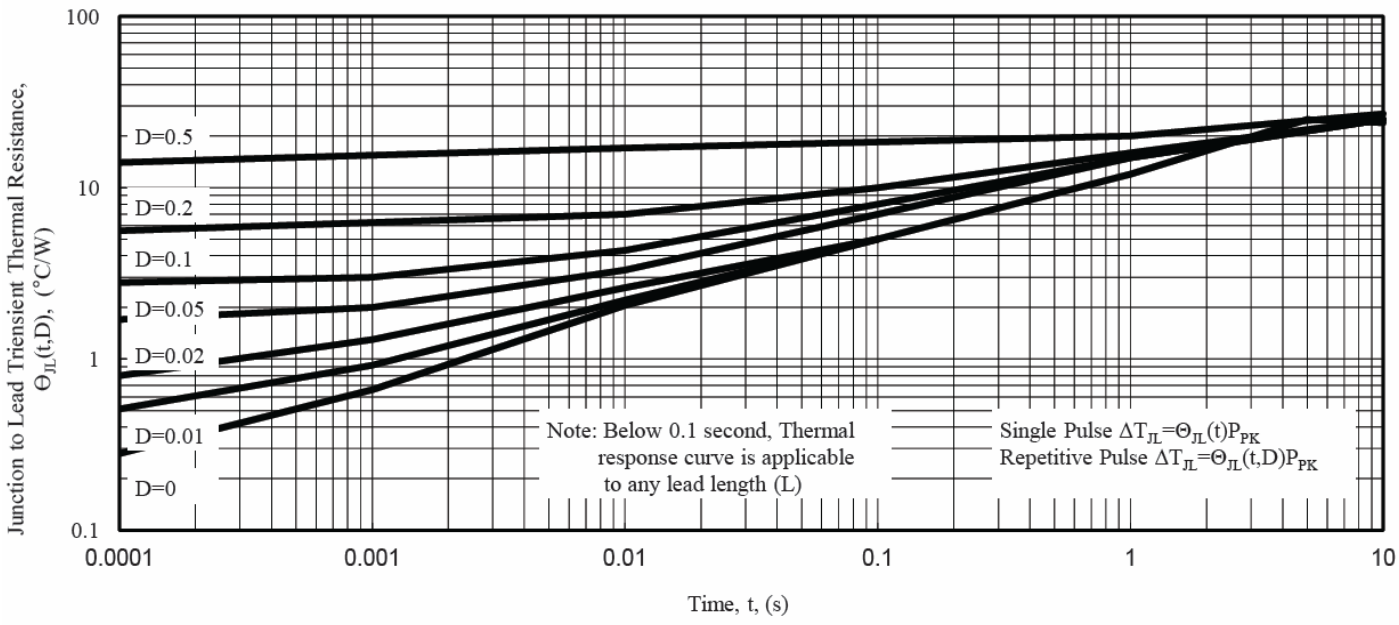

Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch