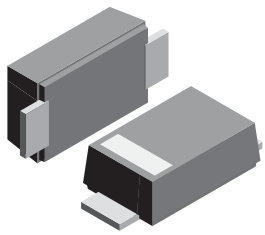
1SMAF5913B - 1SMAF5957B

SURFACE MOUNT SILICON ZENER DIODES

VOLTAGE RANGE: 3.3 - 240V
POWER: 1.5Watts



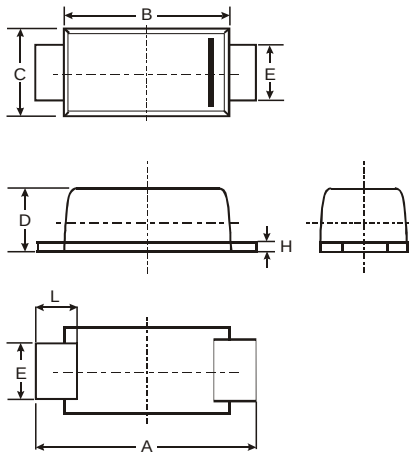
Features

- Complete Voltage Range 3.3 to 240 Volts
- High peak reverse power dissipation
- High reliability
- Low leakage current

Mechanical Data

- Case: SMAF,Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity:Color band denotes cathode end
- Mounting Position:Any
- Weight:0.0018 ounce, 0.064 grams

RoHS COMPLIANT

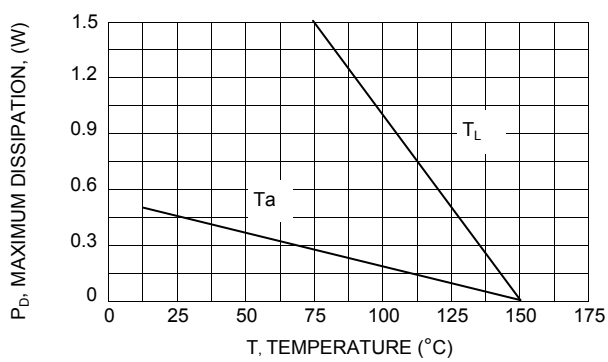


SMAF			
Dim	Min	Max	Typ
A	4.75	4.85	4.80
B	3.68	3.72	3.70
C	2.57	2.63	2.60
D	0.097	1.03	1.00
E	1.38	1.42	1.40
H	0.13	0.17	0.15
L	0.63	0.67	0.65
All Dimensions in mm			

Maximum Ratings T_A = 25°C unless otherwise specified

Rating	Symbol	Value	Unit
DC Power Dissipation @ T_L = 75 °C	P_D	1.5	W
Measured zero lead length(1" square copper pad, FR-4 board) Derate above 75 °C		20	mW/°C
Thermal Resistance Junction to Lead	$R_{\Theta JL}$	50	°C/W
DC Power Dissipation @ Ta = 25 °C	P_D	0.5	W
(FR-4 board) Derate above 25 °C		4.0	mW/°C
Thermal Resistance Junction to Ambient	$R_{\Theta JA}$	250	°C/W
Maximum Forward Voltage at I_F = 200 mA	V_F	1.5	V
Operating Junction and Storang Temperature Range	T_J, T_{STG}	- 65 to + 150	°C

Fig. 1 POWER TEMPERATURE DERATING CURVE



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
	V_Z @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R @ V_R		I_{ZM}
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
1SMAF5913B	3.3	113.6	10	500	1.0	100	1.0	
1SMAF5914B	3.6	104.2	9.0	500	1.0	75	1.0	416
1SMAF5915B	3.9	96.1	7.5	500	1.0	25	1.0	384
1SMAF5916B	4.3	87.2	6.0	500	1.0	5.0	1.0	348
1SMAF5917B	4.7	79.8	5.0	500	1.0	5.0	1.5	319
1SMAF5918B	5.1	73.5	4.0	350	1.0	5.0	2.0	294
1SMAF5919B	5.6	66.9	2.0	250	1.0	5.0	3.0	267
1SMAF5920B	6.2	60.5	2.0	200	1.0	5.0	4.0	241
1SMAF5921B	6.8	55.1	2.5	200	1.0	50	5.2	220
1SMAF5922B	7.5	50.0	3.0	400	0.5	50	6.0	200
1SMAF5923B	8.2	45.7	3.5	400	0.5	50	6.5	182
1SMAF5924B	9.1	41.2	4.0	500	0.5	50	7.0	164
1SMAF5925B	10	37.5	4.5	500	0.25	50	8.0	150
1SMAF5926B	11	34.1	5.5	550	0.25	50	8.4	136
1SMAF5927B	12	31.2	6.5	550	0.25	1.0	9.1	125
1SMAF5928B	13	28.8	7.0	550	0.25	1.0	9.9	115
1SMAF5929B	15	25.0	9.0	600	0.25	1.0	11.4	100
1SMAF5930B	16	23.4	10	600	0.25	1.0	12.2	93
1SMAF5931B	18	20.8	12	650	0.25	1.0	13.7	83
1SMAF5932B	20	18.7	14	650	0.25	1.0	15.2	75
1SMAF5933B	22	17.0	17.5	650	0.25	1.0	16.7	68
1SMAF5934B	24	15.6	19	700	0.25	1.0	18.2	62
1SMAF5935B	27	13.9	23	700	0.25	1.0	20.6	55
1SMAF5936B	30	12.5	26	750	0.25	1.0	22.8	50
1SMAF5937B	33	11.4	33	800	0.25	1.0	25.1	45
1SMAF5938B	36	10.4	38	850	0.25	1.0	27.4	41
1SMAF5939B	39	9.6	45	900	0.25	1.0	29.7	38
1SMAF5940B	43	8.7	53	950	0.25	1.0	32.7	34
1SMAF5941B	47	8.0	67	1000	0.25	1.0	35.8	31
1SMAF5942B	51	7.3	70	1100	0.25	1.0	38.8	29
1SMAF5943B	56	6.7	86	1300	0.25	1.0	42.6	26
1SMAF5944B	62	6.0	100	1500	0.25	1.0	47.1	24
1SMAF5945B	68	5.5	120	1700	0.25	1.0	51.7	22
1SMAF5946B	75	5.0	140	2000	0.25	1.0	56.0	20
1SMAF5947B	82	4.6	160	2500	0.25	1.0	62.2	18
1SMAF5948B	91	4.1	200	3000	0.25	1.0	69.2	16
1SMAF5949B	100	3.7	250	3100	0.25	1.0	76.0	15
1SMAF5950B	110	3.4	300	4000	0.25	1.0	83.6	13
1SMAF5951B	120	3.1	380	4500	0.25	1.0	91.2	12
1SMAF5952B	130	2.9	450	5000	0.25	1.0	98.8	11
1SMAF5953B	150	2.5	600	6000	0.25	1.0	114.0	10
1SMAF5954B	160	2.3	700	6500	0.25	1.0	121.6	9.0
1SMAF5955B	180	2.1	900	7000	0.25	1.0	136.8	8.0
1SMAF5956B	200	1.9	1200	8000	0.25	1.0	152.0	7.0
1SMAF5957B	240	1.5	1600	9000	0.25	1.0	182.4	6.0

Note :

(1) Suffix " B " indicates ± 5% tolerance suffix " A " indicates ± 10% tolerance.