

Silicon Planar Zener Diodes

FEATURES

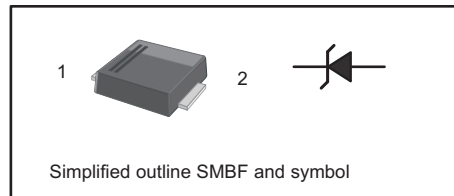
- Total power dissipation: Max. 3 W.
- Wide zener reverse voltage range 3.3V to 200V.
- Small plastic package suitable for surface mounted design.

MECHANICAL DATA

- Case: SMBF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 27mg 0.00095oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

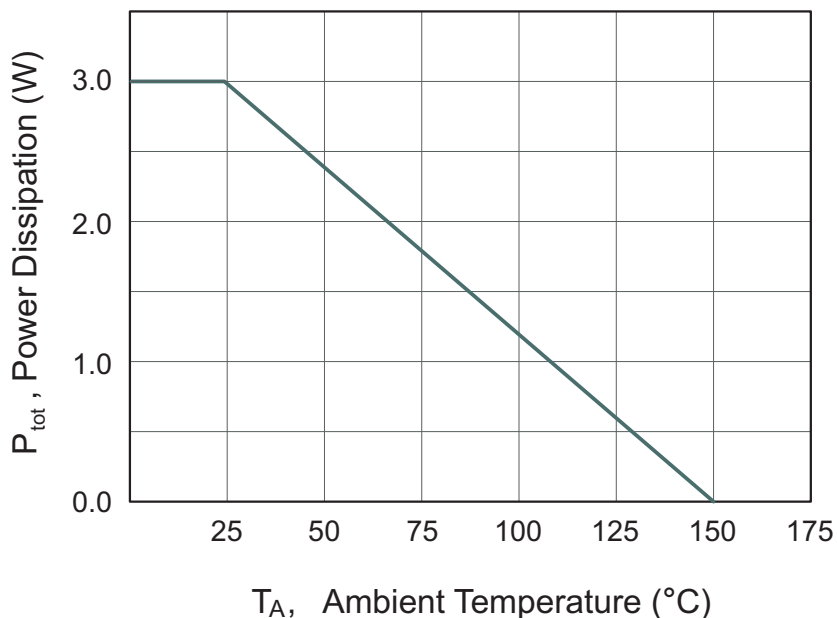


Absolute Maximum Ratings And Characteristics (Ta = 25 °C)

Parameter	Symbol	Value	Unit
Maximum Steady State Power Dissipation at Ta=25°C	P_{tot}	3	W
Forward Voltage at $I_F = 200$ mA	V_F	1.2	V
Junction Temperature Range	T_j	-55 to +150	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C
Typical Thermal Resistance ⁽¹⁾	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	42 10 15	°C/W

(1) P.C.B. mounted with 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas.

Fig.1 Maximum Continuous Power Derating





Characteristics at T_a = 25°C

Type	Marking	Zener Voltage Range (note1)				Dynamic Impedance	Reverse Current		Admissible Zener Current
		V _{ZT} (at I _{ZT})			at I _{ZT}		Z _{ZT} (at I _{ZT})	I _R	
		Min (V)	Nom (V)	Max (V)	(mA)	Max (Ω)	Max (μA)	(V)	I _{ZM} (mA)
1SMBF5913B	913B	3.10	3.3	3.50	114	10	100	1	454
1SMBF5914B	914B	3.40	3.6	3.80	104	9.0	75	1	416
1SMBF5915B	915B	3.70	3.9	4.10	96	7.5	25	1	384
1SMBF5916B	916B	4.06	4.3	4.56	87	6.0	5	1	348
1SMBF5917B	917B	4.50	4.7	4.93	80	5.0	5	1	319
1SMBF5918B	918B	4.84	5.1	5.36	74	4.0	5	2	294
1SMBF5919B	919B	5.32	5.6	5.92	67	2.0	5	3	267
1SMBF5920B	920B	5.86	6.2	6.51	61	2.0	5	4	241
1SMBF5921B	921B	6.46	6.8	7.18	55	2.5	5	5	220
1SMBF5922B	922B	7.12	7.5	7.88	50	3.0	5	6	200
1SMBF5923B	923B	7.79	8.2	8.67	46	3.5	5	6	182
1SMBF5924B	924B	8.60	9.1	9.59	41	4.0	5	7	164
1SMBF5925B	925B	9.50	10	10.5	38	4.5	5	7	150
1SMBF5926B	926B	10.4	11	11.6	34	5.5	1	8	136
1SMBF5927B	927B	11.4	12	12.6	31	6.5	1	9	125
1SMBF5928B	928B	12.4	13	14.1	29	7.0	1	10	115
1SMBF5929B	929B	13.8	15	15.8	25	9.0	1	11	100
1SMBF5930B	930B	15.2	16	17.1	23	10	1	12	93
1SMBF5931B	931B	16.8	18	19.2	21	12	1	13	83
1SMBF5932B	932B	19.0	20	21.2	19	14	1	15	75
1SMBF5933B	933B	20.8	22	23.3	17	18	1	17	68
1SMBF5934B	934B	22.8	24	26.0	16	19	1	19	62
1SMBF5935B	935B	25.3	27	28.9	14	23	1	21	55
1SMBF5936B	936B	28.2	30	32.0	12.5	26	1	23	50
1SMBF5937B	937B	31.3	33	34.9	11.4	33	1	25	45
1SMBF5938B	938B	34.2	36	37.9	10.4	38	1	27	41
1SMBF5939B	939B	37.2	39	41.5	9.6	45	1	30	38
1SMBF5940B	940B	40.9	43	45.6	8.7	53	1	33	34
1SMBF5941B	941B	44.9	47	49.8	8.0	67	1	36	31
1SMBF5942B	942B	48.6	51	54.0	7.3	70	1	39	29
1SMBF5943B	943B	53.6	56	58.8	6.7	86	1	42	26
1SMBF5944B	944B	58.9	62	65.6	6.0	100	1	47	24
1SMBF5945B	945B	64.6	68	71.7	5.5	120	1	52	22
1SMBF5946B	946B	71.2	75	78.8	5.0	140	1	57	20
1SMBF5947B	947B	77.9	82	87.0	4.6	160	1	62	18
1SMBF5948B	948B	86.0	91	96.0	4.1	200	1	69	16
1SMBF5949B	949B	95.0	100	105	3.7	250	1	76	15
1SMBF5950B	950B	104	110	116	3.4	300	1	84	13
1SMBF5951B	951B	114	120	127	3.1	380	1	91	12
1SMBF5952B	952B	125	135	142	2.8	470	1	100	11
1SMBF5953B	953B	140	150	157	2.5	600	1	110	10
1SMBF5954B	954B	155	165	172	2.3	720	1	120	9.0
1SMBF5955B	955B	170	180	191	2.1	900	1	135	8.0
1SMBF5956B	956B	189	200	211	1.9	1200	1	150	7.5

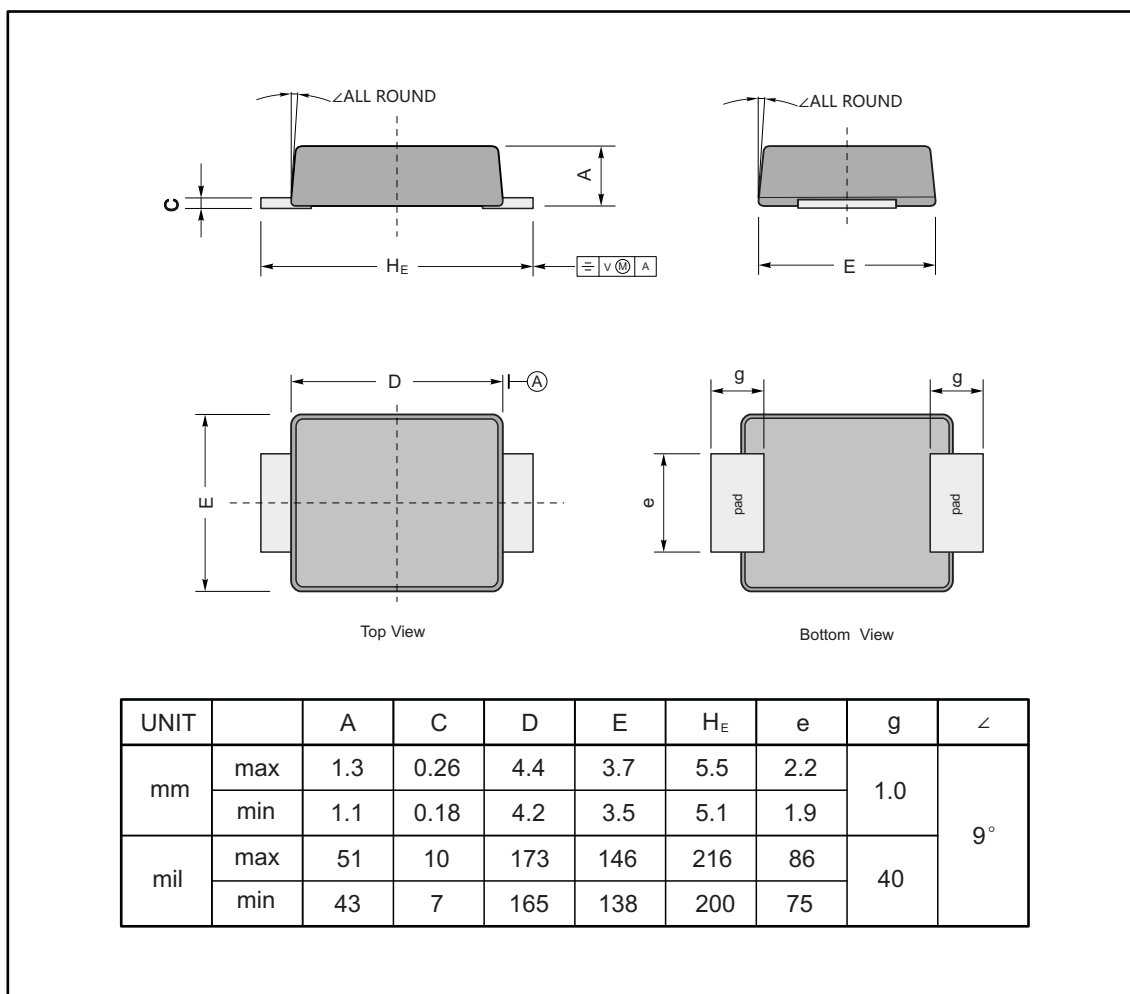
(1) V_{ZT} is tested with pulses (20 ms)



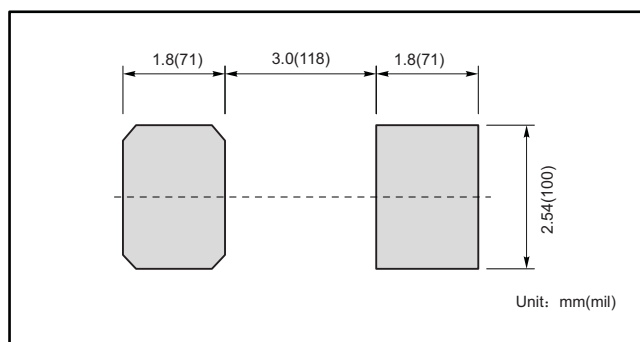
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMBF



The recommended mounting pad size





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