

# 1SMA5913BF~1SMA5956BF

## Surface Mount Silicon Zener Diodes

### Features

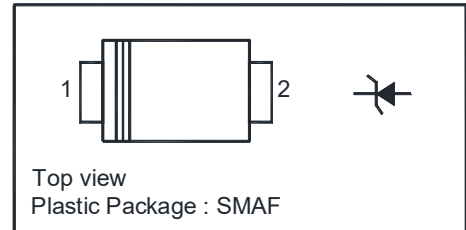
- High peak reverse power dissipation
- Low leakage current

### Mechanical Data

- **Case:** SMAF
- **Terminals:** Solderable per MIL-STD-750, Method 2026

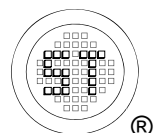
### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



### Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Power Dissipation at $T_L = 75^\circ\text{C}$	$P_{\text{tot}}$	1.5	W
Forward Voltage at $I_F = 200 \text{ mA}$	$V_F$	1.5	V
Junction Temperature	$T_J$	- 55 to + 150	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{Stg}}$	- 55 to + 150	$^\circ\text{C}$



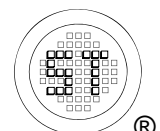
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## Electrical Characteristics (Rating at $T_a = 25^\circ\text{C}$ unless otherwise specified)

Type <sup>1)</sup>	Marking Code <sup>1)</sup>	Zener Voltage Range <sup>2)</sup>			Zener Impedance		Reverse Current		Admissible Zener Current
		$V_{Znom}$	$V_{ZT}$ (at $I_{ZT}$ )		$I_{ZT}$	$Z_{ZT}$ (at $I_{ZT}$ )	$I_R$	at $V_R$	
		(V)	Min. (V)	Max. (V)	(mA)	Max. ( $\Omega$ )	Max. ( $\mu\text{A}$ )	(V)	$I_{ZM}$ (mA)
1SMA5913BF	913B	3.3	3.13	3.47	113.6	10	100	1	454
1SMA5914BF	914B	3.6	3.42	3.78	104.2	9	75	1	416
1SMA5915BF	915B	3.9	3.7	4.1	96.1	7.5	25	1	384
1SMA5916BF	916B	4.3	4.08	4.52	87.2	6	5	1	348
1SMA5917BF	917B	4.7	4.46	4.94	79.8	5	5	1.5	319
1SMA5918BF	918B	5.1	4.84	5.36	73.5	4	5	2	294
1SMA5919BF	919B	5.6	5.32	5.88	66.9	2	5	3	267
1SMA5920BF	920B	6.2	5.89	6.51	60.5	2	5	4	241
1SMA5921BF	921B	6.8	6.46	7.14	55	2.5	5	5.2	220
1SMA5922BF	922B	7.5	7.12	7.88	50	3	5	6	200
1SMA5923BF	923B	8.2	7.79	8.61	45.7	3.5	5	6.5	182
1SMA5924BF	924B	9.1	8.6	9.56	41.2	4	5	7	164
1SMA5925BF	925B	10	9.5	10.5	37.5	4.5	5	8	150
1SMA5926BF	926B	11	10.4	11.6	34	5.5	1	8.4	136
1SMA5927BF	927B	12	11.4	12.6	31.2	6.5	1	9	125
1SMA5928BF	928B	13	12.35	14.1	28.8	7	1	9.9	115
1SMA5929BF	929B	15	13.8	15.8	25	9	1	11.4	100
1SMA5930BF	930B	16	15.2	16.8	23.4	10	1	12.2	93
1SMA5931BF	931B	18	16.8	19.2	21	12	1	13.7	83
1SMA5932BF	932B	20	19	21.2	19	14	1	15.2	75
1SMA5933BF	933B	22	20.8	23.3	17	18	1	16.7	68
1SMA5934BF	934B	24	22.8	25.2	16	19	1	18.2	62
1SMA5935BF	935B	27	25.3	28.9	14	23	1	20.6	55
1SMA5936BF	936B	30	28.2	32	12.5	26	1	23	50
1SMA5937BF	937B	33	31.3	34.9	11.4	33	1	25	45
1SMA5938BF	938B	36	34.2	37.9	10.4	38	1	27	41
1SMA5939BF	939B	39	37.2	41.5	9.6	45	1	30	38
1SMA5940BF	940B	43	40.9	45.6	8.7	53	1	33	34
1SMA5941BF	941B	47	44.9	49.8	8.0	67	1	36	31
1SMA5942BF	942B	51	48.6	54	7.3	70	1	39	29
1SMA5943BF	943B	56	53.6	58.8	6.7	86	1	42	26
1SMA5944BF	944B	62	58.9	65.6	6	100	1	47	24
1SMA5945BF	945B	68	64.6	71.7	5.5	120	1	52	22
1SMA5946BF	946B	75	71.2	78.8	5	140	1	57	20
1SMA5947BF	947B	82	77.9	87	4.6	160	1	62	18
1SMA5948BF	948B	91	86	96	4.1	200	1	69	16
1SMA5949BF	949B	100	95	105	3.7	250	1	76	15
1SMA5950BF	950B	110	104	116	3.4	300	1	84	13
1SMA5951BF	951B	120	114	127	3.1	380	1	91	12
1SMA5952BF	952B	130	125	142	2.9	450	1	100	11
1SMA5953BF	953B	150	140	157	2.5	600	1	114	10
1SMA5954BF	954B	160	152	168	2.3	700	1	121.6	9
1SMA5955BF	955B	180	168	189	2.1	900	1	136.8	8
1SMA5956BF	956B	200	189	211	1.9	1200	1	152	7

<sup>1)</sup> Suffix "B" indicates  $\pm 5\%$  tolerance

<sup>2)</sup>  $V_{ZT}$  is tested with pulses ( 20 ms )



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## Electrical characteristic curves

Fig 1. Maximum Continuous Power Derating

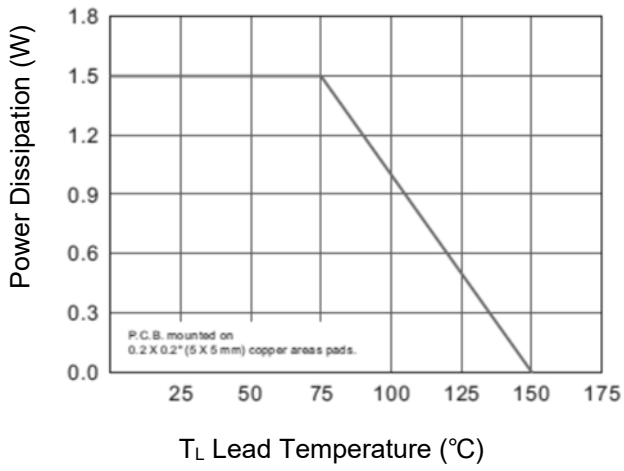
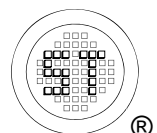
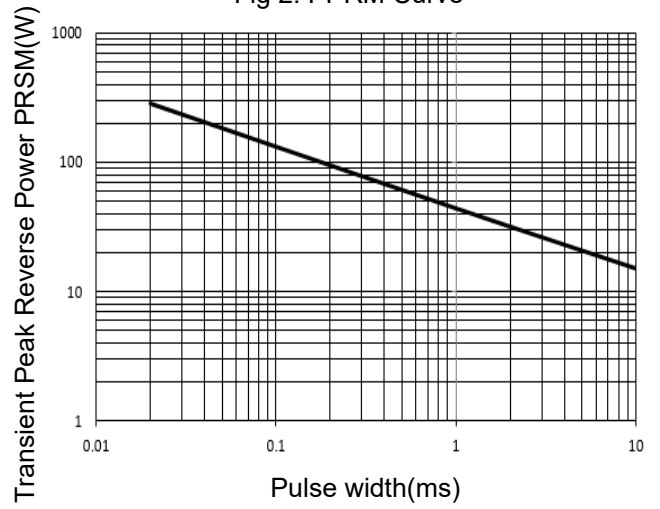


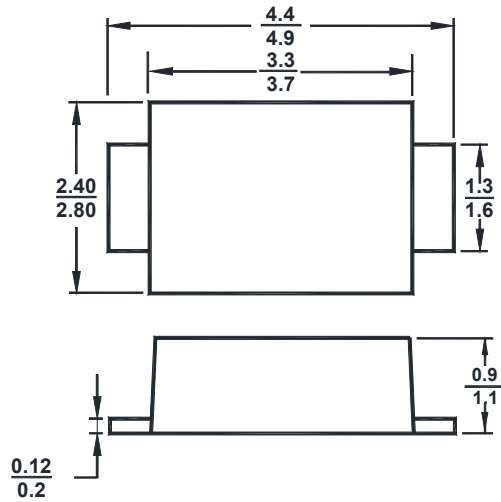
Fig 2. PPRM Curve



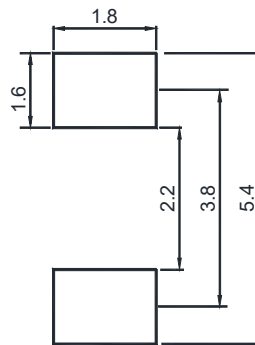
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Package Outline Dimensions (Units: mm)

SMAF



## Recommended Soldering Footprint



## Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SMAF	8	4 ± 0.1	(0.157 ± 0.004)	178	7	3,000
				330	13	10,000

## Marking information

" \*\*\*\* " = Part No.  
 " III " = Cathode line  
 Font type: Arial

