

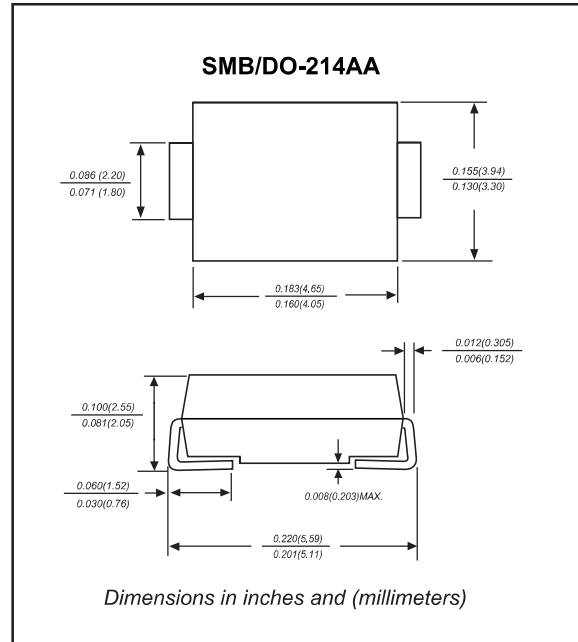
### Features

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Wide zener reverse voltage range 3.3V to 200V.
- Small package size for high density applications.
- Ideally suited for automated assembly processes.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228
- Compliant to Halogen-free

### Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, DO-214AA/ SMB
- Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any

### Package outline



### Maximum ratings (at $T_a=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 200 \text{ mA}$	$V_F$			1.20	V
Power dissipation	$T_L = 50^\circ\text{C}$	$P_D$			3.0	W
Operating junction temperature range		$T_J$	-55		+150	$^\circ\text{C}$
Storage temperature range		$T_{STG}$	-65		+175	$^\circ\text{C}$

### Electrical characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

TYPE	Marking Code	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)	( $\Omega$ )	( $\Omega$ )	(mA)	( $\mu\text{A}$ )	(V)	(mA)
SMBJ5913B	5913	3.3	113.6	10	500	1.0	100	1.0	454
SMBJ5914B	5914	3.6	104.2	9.0	500	1.0	75	1.0	416
SMBJ5915B	5915	3.9	96.1	7.5	500	1.0	25	1.0	384
SMBJ5916B	5916	4.3	87.2	6.0	500	1.0	5.0	1.0	348
SMBJ5917B	5917	4.7	79.8	5.0	500	1.0	5.0	1.5	319
SMBJ5918B	5918	5.1	73.5	4.0	500	1.0	5.0	2.0	294
SMBJ5919B	5919	5.6	66.9	2.0	250	1.0	5.0	3.0	267
SMBJ5920B	5920	6.2	60.5	2.0	200	1.0	5.0	4.0	241
SMBJ5921B	5921	6.8	55.1	2.5	200	1.0	50	5.2	220
SMBJ5922B	5922	7.5	50.0	3.0	400	0.5	50	6.0	200
SMBJ5923B	5923	8.2	45.7	3.5	400	0.5	50	6.5	182
SMBJ5924B	5924	9.1	41.2	4.0	500	0.5	50	7.0	164
SMBJ5925B	5925	10	37.5	4.5	500	0.25	50	8.0	150
SMBJ5926B	5926	11	34.1	5.5	550	0.25	50	8.4	136
SMBJ5927B	5927	12	31.2	6.5	550	0.25	1.0	9.1	125
SMBJ5928B	5928	13	28.8	7.0	550	0.25	1.0	9.9	115
SMBJ5929B	5929	15	25.0	9.0	600	0.25	1.0	11.4	100
SMBJ5930B	5930	16	23.4	10	600	0.25	1.0	12.2	93
SMBJ5931B	5931	18	20.8	12	650	0.25	1.0	13.7	83
SMBJ5932B	5932	20	18.7	14	650	0.25	1.0	15.2	75
SMBJ5933B	5933	22	17.0	17.5	650	0.25	1.0	16.7	68
SMBJ5934B	5934	24	15.6	19	700	0.25	1.0	18.2	62
SMBJ5935B	5935	27	13.9	23	700	0.25	1.0	20.6	55
SMBJ5936B	5936	30	12.5	26	750	0.25	1.0	22.8	50
SMBJ5937B	5937	33	11.4	33	800	0.25	1.0	25.1	45
SMBJ5938B	5938	36	10.4	38	850	0.25	1.0	27.4	41
SMBJ5939B	5939	39	9.6	45	900	0.25	1.0	29.7	38
SMBJ5940B	5940	43	8.7	53	950	0.25	1.0	32.7	34
SMBJ5941B	5941	47	8.0	67	1000	0.25	1.0	35.8	31
SMBJ5942B	5942	51	7.3	70	1100	0.25	1.0	38.8	29
SMBJ5943B	5943	56	6.7	86	1300	0.25	1.0	42.6	26
SMBJ5944B	5944	62	6.0	100	1500	0.25	1.0	47.1	24
SMBJ5945B	5945	68	5.5	120	1700	0.25	1.0	51.7	22
SMBJ5946B	5946	75	5.0	140	2000	0.25	1.0	56.0	20
SMBJ5947B	5947	82	4.6	160	2500	0.25	1.0	62.2	18
SMBJ5948B	5948	91	4.1	200	3000	0.25	1.0	69.2	16
SMBJ5949B	5949	100	3.7	250	3100	0.25	1.0	76.0	15
SMBJ5950B	5950	110	3.4	300	4000	0.25	1.0	83.6	13
SMBJ5951B	5951	120	3.1	380	4500	0.25	1.0	91.2	12
SMBJ5952B	5952	130	2.9	450	5000	0.25	1.0	98.8	11
SMBJ5953B	5953	150	2.5	600	6000	0.25	1.0	114.0	10
SMBJ5954B	5954	160	2.3	700	6500	0.25	1.0	121.6	9.0
SMBJ5955B	5955	180	2.1	900	7000	0.25	1.0	136.8	8.0
SMBJ5956B	5956	200	1.9	1200	8000	0.25	1.0	152.0	7.0

**Note :**

- ( 1 ) Suffix " A " indicates  $\pm 10\%$  tolerance, suffix " B " indicates  $\pm 5.0\%$  tolerance.

## Rating and characteristic curves

FIG.1 Typical Thermal Response L

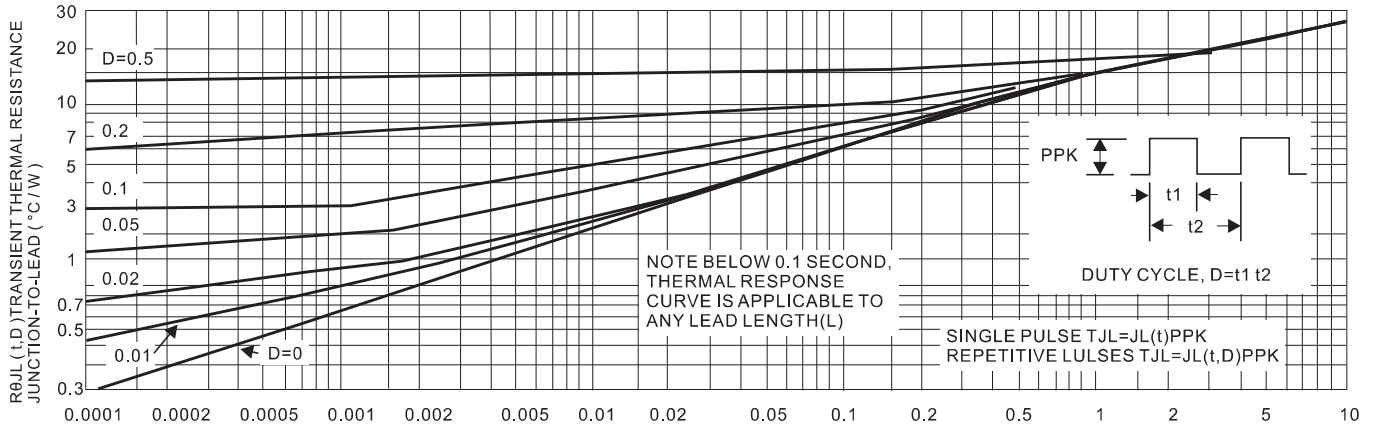


FIG. 2 Maximum Surge Power

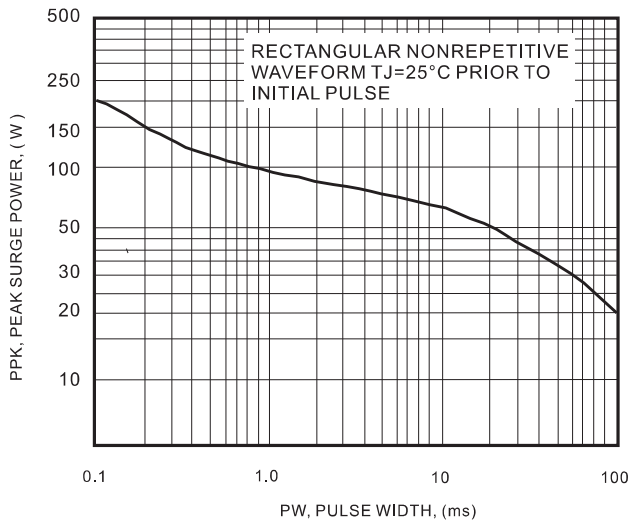


FIG. 3 Maximum Surge Power

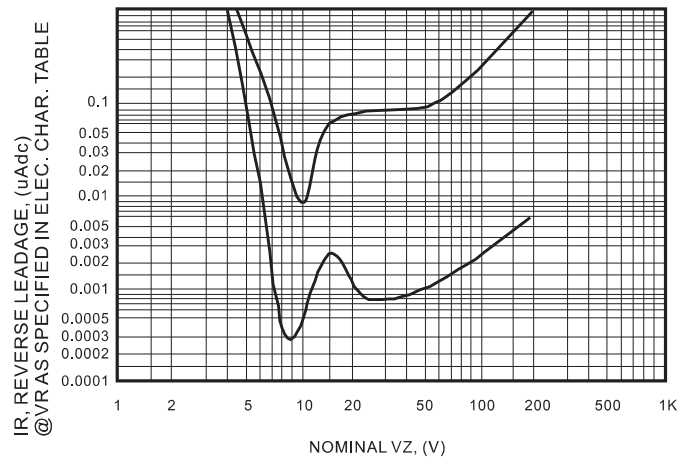


FIG.4 Units To 12 Volts

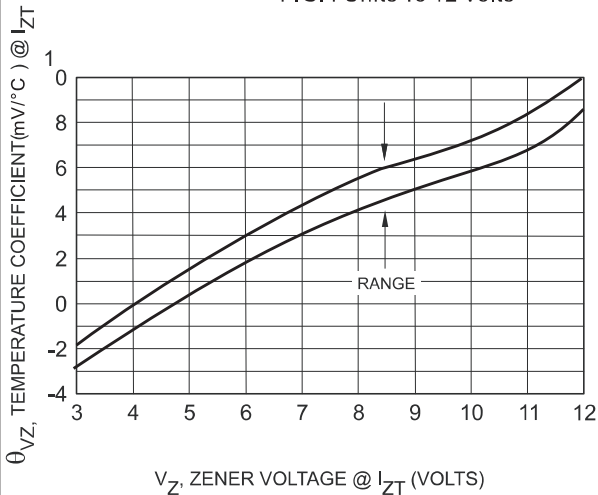
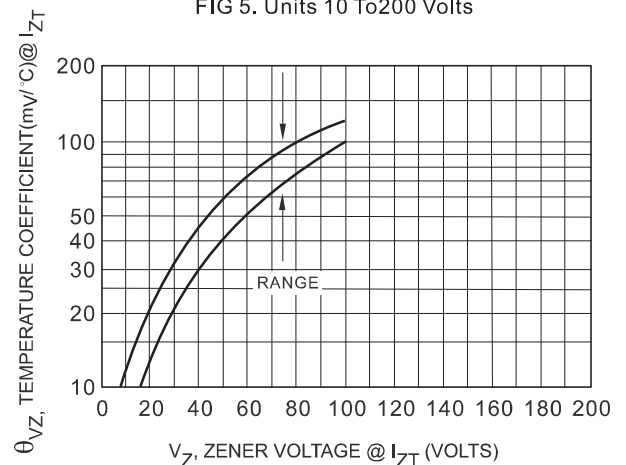


FIG 5. Units 10 To 200 Volts



### Rating and characteristic curves

FIG.6 To 10 Volts

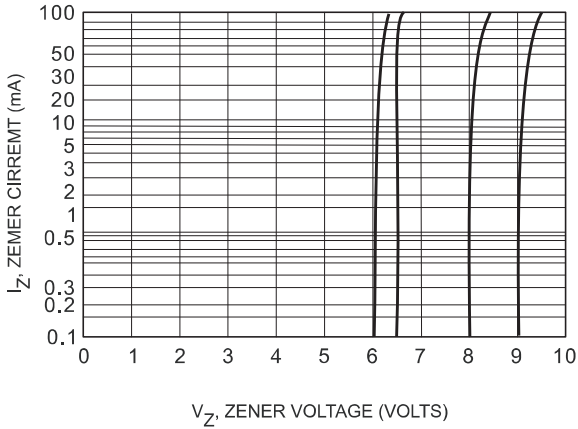


FIG.7 VZ = 12 Thru 82 Volts

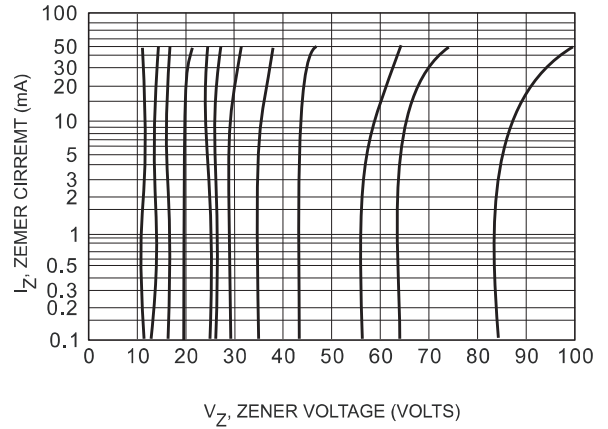


FIG. 8 Typical Thermal Resistance

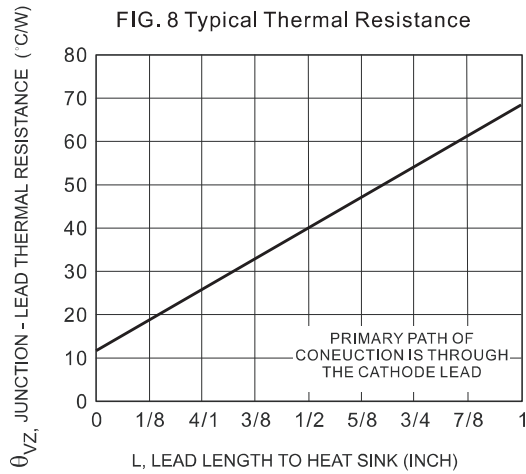


FIG.9 STEADY STATE POWER DERATING

