

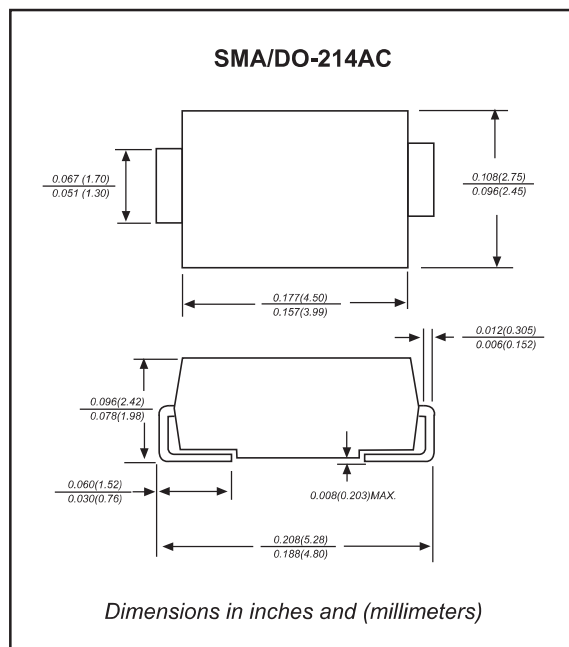
Features

- 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
- Suffix "-Q1" for AEC-Q101

Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, DO-214AC/ SMA
- 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°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)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
SZ553D-Q1	553D	3.3	227.3	10.0	500	1.0	100	1.0	817
SZ553G-Q1	553G	3.6	208.3	9.0	500	1.0	100	1.0	749
SZ553J-Q1	553J	3.9	192	4.5	400	1.0	80	1.0	630
SZ554D-Q1	554D	4.3	174	4.5	400	1.0	30	1.0	590
SZ554H-Q1	554H	4.7	160	4.0	500	1.0	20	1.0	550
SZ555B-Q1	555B	5.1	147	3.5	550	1.0	5.0	1.0	520
SZ555G-Q1	555G	5.6	134	2.5	600	1.0	5.0	2.0	480
SZ556C-Q1	556C	6.2	121	1.5	700	1.0	5.0	3.0	435
SZ556I-Q1	556I	6.8	110	2.0	700	1.0	50	4.0	393
SZ557F-Q1	557F	7.5	100	2.0	700	0.5	50	5.0	360
SZ558C-Q1	558C	8.2	91	2.3	700	0.5	50	6.0	330
SZ559B-Q1	559B	9.1	82	2.5	700	0.5	50	7.0	297
SZ5510-Q1	5510	10	75	3.5	700	0.3	50	7.6	270
SZ5511-Q1	5511	11	68	4.0	700	0.25	50	8.4	225
SZ5512-Q1	5512	12	63	4.5	700	0.25	1.0	9.1	246
SZ5513-Q1	5513	13	58	4.5	700	0.25	0.5	9.1	208
SZ5514-Q1	5514	14	53	5.0	700	0.25	0.5	10.6	193
SZ5515-Q1	5515	15	50	5.5	700	0.25	0.5	11.4	180
SZ5516-Q1	5516	16	47	5.5	700	0.25	0.5	12.2	169
SZ5517-Q1	5517	17	44	6.0	750	0.25	0.5	13.0	159
SZ5518-Q1	5518	18	42	6.0	750	0.25	0.5	13.7	150
SZ5519-Q1	5519	19	40	7.0	750	0.25	0.5	14.4	142
SZ5520-Q1	5520	20	37	7.0	750	0.25	0.5	15.2	135
SZ5522-Q1	5522	22	34	8.0	750	0.25	0.5	16.7	123
SZ5524-Q1	5524	24	31	9.0	750	0.25	0.5	18.2	112
SZ5527-Q1	5527	27	28	10	750	0.25	0.5	20.6	100
SZ5528-Q1	5528	28	27	12	750	0.25	0.5	21.0	96
SZ5530-Q1	5530	30	25	16	1000	0.25	0.5	22.5	90
SZ5533-Q1	5533	33	23	20	1000	0.25	0.5	25.1	82
SZ5536-Q1	5536	36	21	22	1000	0.25	0.5	27.4	75
SZ5539-Q1	5539	39	19	28	1000	0.25	0.5	29.7	69
SZ5543-Q1	5543	43	17	33	1500	0.25	0.5	32.7	63
SZ5547-Q1	5547	47	16	38	1500	0.25	0.5	35.6	57
SZ5551-Q1	5551	51	15	45	1500	0.25	0.5	38.8	53
SZ5556-Q1	5556	56	13	50	2000	0.25	0.5	42.6	48
SZ5562-Q1	5562	62	12	55	2000	0.25	0.5	47.1	44
SZ5568-Q1	5568	68	11	70	2000	0.25	0.5	51.7	40
SZ5575-Q1	5575	75	10	85	2000	0.25	0.5	56.0	36
SZ5582-Q1	5582	82	9.1	95	3000	0.25	0.5	62.2	33
SZ5591-Q1	5591	91	8.2	115	3000	0.25	0.5	69.2	30
SZ55B0-Q1	55B0	100	7.5	160	3000	0.25	0.5	76.0	27
SZ55B1-Q1	55B1	110	6.8	225	4000	0.25	0.5	83.6	25
SZ55B2-Q1	55B2	120	6.3	300	4500	0.25	0.5	91.2	22
SZ55B3-Q1	55B3	130	5.8	375	5000	0.25	0.5	98.8	21
SZ55B4-Q1	55B4	140	5.3	475	5000	0.25	0.5	106.4	19
SZ55B5-Q1	55B5	150	5.0	550	6000	0.25	0.5	114.0	18
SZ55B6-Q1	55B6	160	4.7	625	6500	0.25	0.5	121.6	17
SZ55B7-Q1	55B7	170	4.4	650	7000	0.25	0.5	130.4	16
SZ55B8-Q1	55B8	180	4.2	700	7000	0.25	0.5	136.8	15
SZ55B9-Q1	55B9	190	4.0	800	8000	0.25	0.5	144.8	14
SZ55D0-Q1	55D0	200	3.7	875	8000	0.25	0.5	152.0	13

Note:

- (1) The type number listed have a standard tolerance on the nominal zener voltage of $\pm 5.0\%$, altered the fourth number of type from "5" for $\pm 5.0\%$ tolerance to be "0" for $\pm 10\%$ tolerance.

Rating and characteristic curves

FIG.1 Typical Thermal Response L

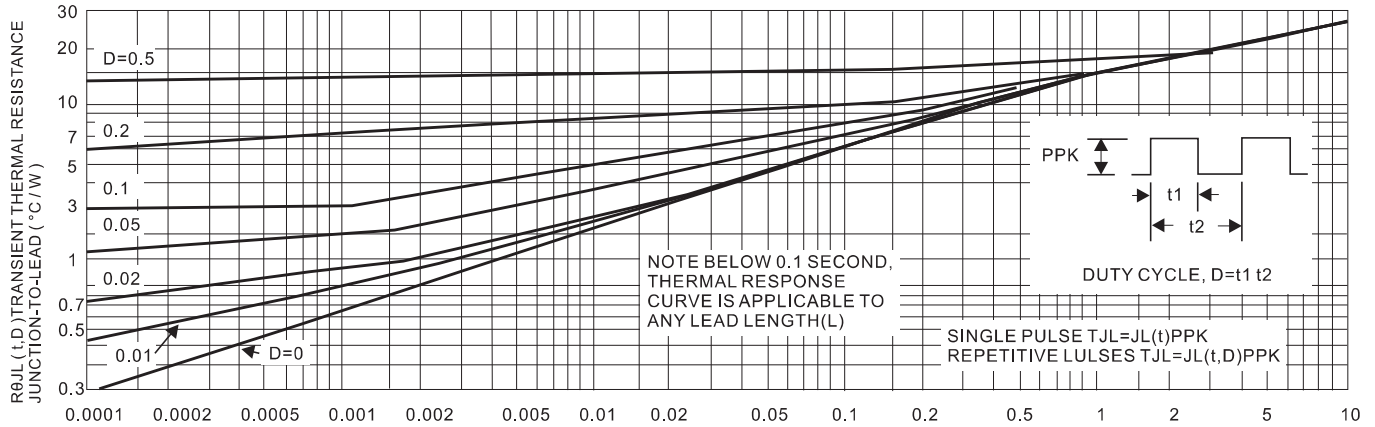


FIG. 2 Maximum Surge Power

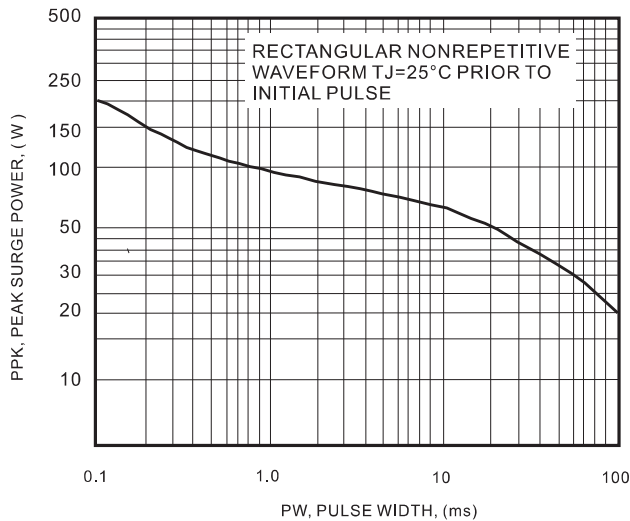


FIG. 3 Maximum Surge Power

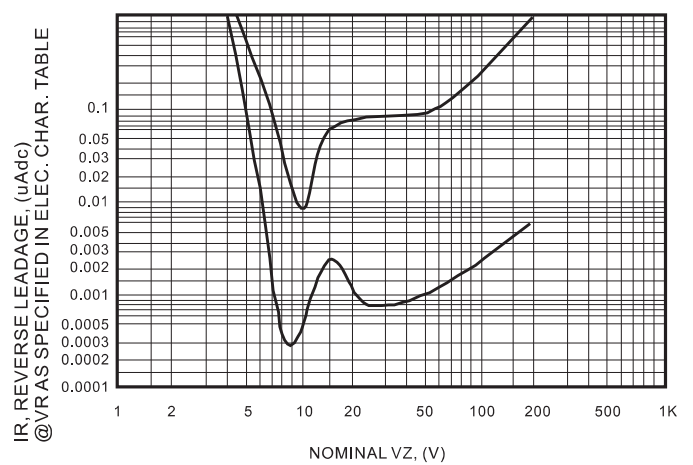


FIG.4 Units To 12 Volts

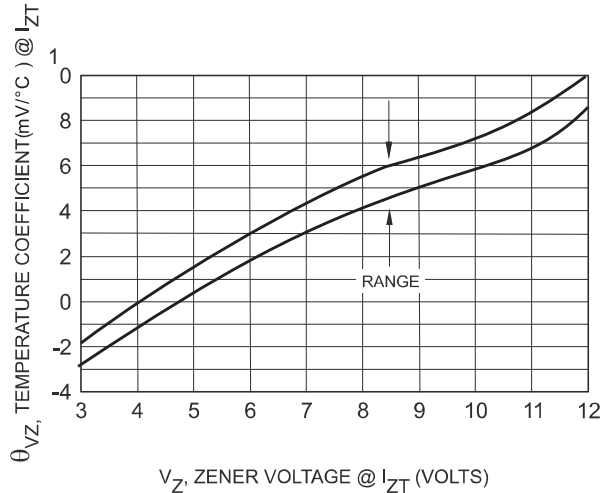
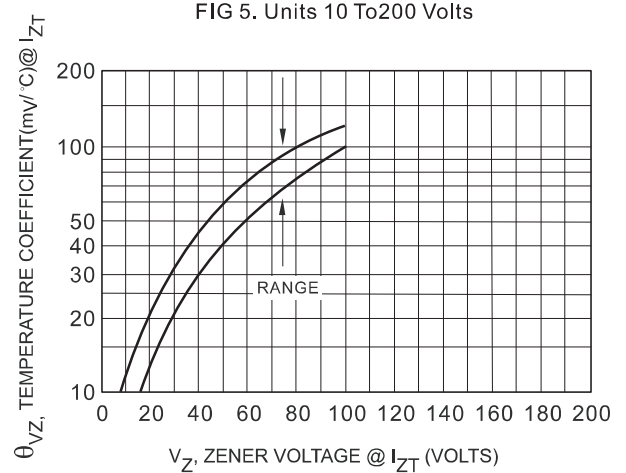


FIG 5. Units 10 To200 Volts



Rating and characteristic curves

FIG.6 To 10 Volts

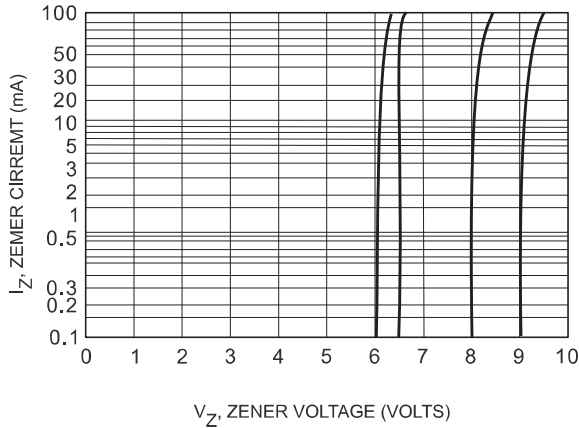


FIG.7 $V_Z = 12$ Thru 82 Volts

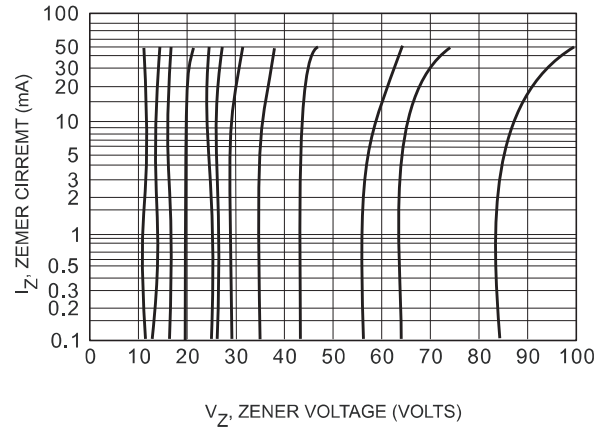


FIG. 8 Typical Thermal Resistance

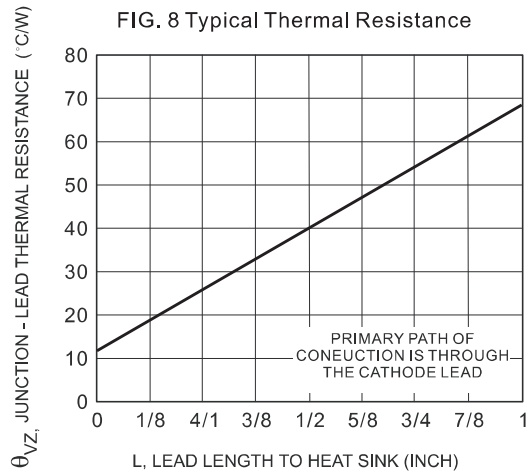
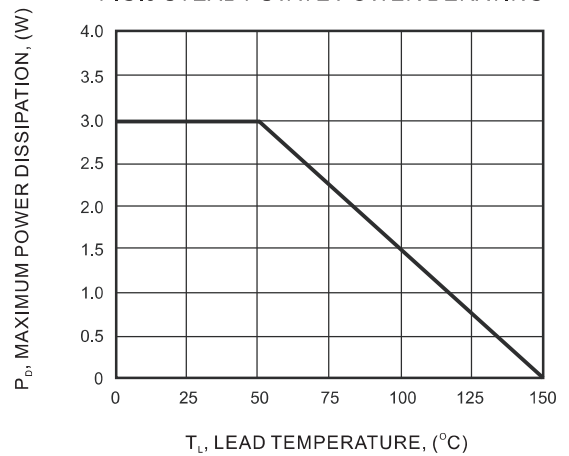


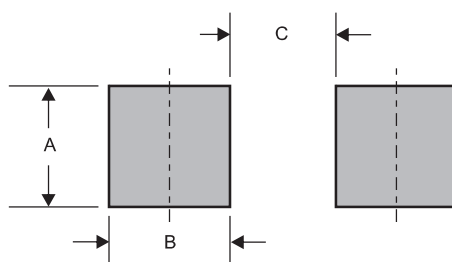
FIG.9 STEADY STATE POWER DERATING



Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMA	0.110 (2.80)	0.063 (1.60)	0.087 (2.20)