

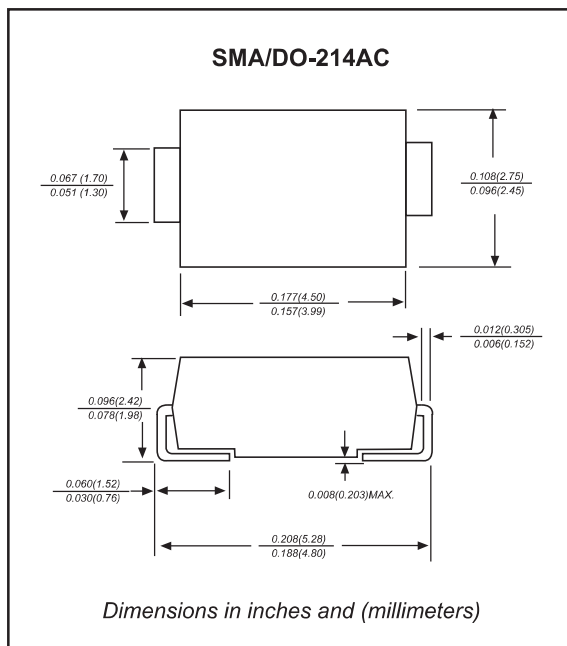
Features

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Standard zener voltage tolerance $\pm 5\%$.
- Low inductance.
- Low profile package.
- Built-in strain relief.
- 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, JEDEC 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	at $T_L=75^\circ\text{C}$	P_D			1000	mW
Thermal resistance	Junction to case(Note 1) Junction to ambient(Note 1)	$R_{\theta JC}$ $R_{\theta JA}$		30 50		$^\circ\text{C/W}$
Operating junction temperature range		T_J	-55		+150	$^\circ\text{C}$
Storage temperature range		T_{STG}	-65		+175	$^\circ\text{C}$

Note : 1. Mounted on 0.2"x0.2"(5x5mm)FR-4 PCB

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

Part No.	Marking code	Zener voltage			Test current	Zener impedance			Leakage current		Maximum Surge current
		V _Z @ I _{ZT} (Volts)				I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R	
		Min.	Nom.	Max.	mA	(Ω)Max	(Ω)Max	mA	(uA)Max	Volts	mApk
SMA4728A-Q1	Z3V3	3.14	3.3	3.47	76	10	400	1.00	100	1.0	1380
SMA4729A-Q1	Z3V6	3.42	3.6	3.78	69	10	400	1.00	100	1.0	1260
SMA4730A-Q1	Z3V9	3.71	3.9	4.10	64	9	400	1.00	50	1.0	1190
SMA4731A-Q1	Z4V3	4.09	4.3	4.52	58	9	400	1.00	10	1.0	1070
SMA4732A-Q1	Z4V7	4.47	4.7	4.94	53	8	500	1.00	10	1.0	970
SMA4733A-Q1	Z5V1	4.85	5.1	5.36	49	7	550	1.00	10	1.0	890
SMA4734A-Q1	Z5V6	5.32	5.6	5.88	45	5	600	1.00	10	2.0	810
SMA4735A-Q1	Z6V2	5.89	6.2	6.51	41	2	700	1.00	10	3.0	730
SMA4736A-Q1	Z6V8	6.46	6.8	7.14	37	3.5	700	1.00	10	4.0	660
SMA4737A-Q1	Z7V5	7.13	7.5	7.88	34	4.0	700	0.50	10	5.0	605
SMA4738A-Q1	Z8V2	7.79	8.2	8.61	31	4.5	700	0.50	10	6.0	550
SMA4739A-Q1	Z9V1	8.65	9.1	9.56	28	5	700	0.50	10	7.0	500
SMA4740A-Q1	Z10	9.50	10	10.50	25	7	700	0.25	10	7.6	454
SMA4741A-Q1	Z11	10.45	11	11.55	23	8	700	0.25	5	8.4	414
SMA4742A-Q1	Z12	11.40	12	12.60	21	9	700	0.25	5	9.1	380
SMA4743A-Q1	Z13	12.35	13	13.65	19	10	700	0.25	5	9.9	344
SMA4744A-Q1	Z15	14.25	15	15.75	17	14	700	0.25	5	11.4	304
SMA4745A-Q1	Z16	15.20	16	16.80	15.5	16	700	0.25	5	12.2	285
SMA4746A-Q1	Z18	17.10	18	18.90	14	20	750	0.25	5	13.7	250
SMA4747A-Q1	Z20	19.00	20	21.00	12.5	22	750	0.25	5	15.2	225
SMA4748A-Q1	Z22	20.90	22	23.10	11.5	23	750	0.25	5	16.7	205
SMA4749A-Q1	Z24	22.80	24	25.20	10.5	25	750	0.25	5	18.2	190
SMA4750A-Q1	Z27	25.65	27	28.35	9.5	35	750	0.25	5	20.6	170
SMA4751A-Q1	Z30	28.50	30	31.50	8.5	40	1000	0.25	5	22.8	150
SMA4752A-Q1	Z33	31.35	33	34.65	7.5	45	1000	0.25	5	25.1	135
SMA4753A-Q1	Z36	34.20	36	37.80	7.0	50	1000	0.25	5	27.4	125
SMA4754A-Q1	Z39	37.05	39	40.95	6.5	60	1000	0.25	5	29.7	115
SMA4755A-Q1	Z43	40.85	43	45.15	6.0	70	1500	0.25	5	32.7	110
SMA4756A-Q1	Z47	44.65	47	49.35	5.5	80	1500	0.25	5	35.8	95
SMA4757A-Q1	Z51	48.45	51	53.55	5.0	95	1500	0.25	5	38.8	90
SMA4758A-Q1	Z56	53.20	56	58.80	4.5	110	2000	0.25	5	42.6	80
SMA4759A-Q1	Z62	58.90	62	65.10	4.0	125	2000	0.25	5	47.1	70
SMA4760A-Q1	Z68	64.60	68	71.40	3.7	150	2000	0.25	5	51.7	65
SMA4761A-Q1	Z75	71.25	75	78.75	3.3	175	2000	0.25	5	56.0	60
SMA4762A-Q1	Z82	77.90	82	86.10	3.0	200	3000	0.25	5	62.2	55
SMA4763A-Q1	Z91	86.45	91	95.55	2.8	250	3000	0.25	5	69.2	50
SMA4764A-Q1	Z100	95.00	100	105.0	2.5	350	3000	0.25	5	76.0	45

Note : 5% tolerance of Zener voltage

Rating and characteristic curves (SMA4728A-Q1 THRU SMA4764A-Q1)

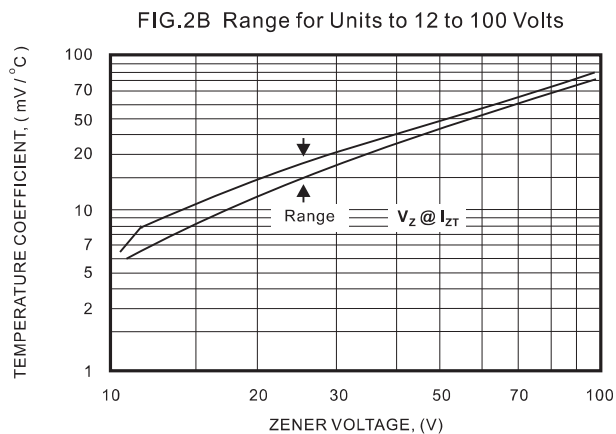
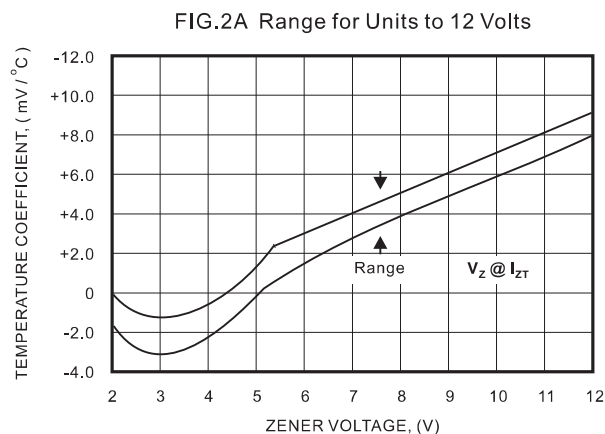
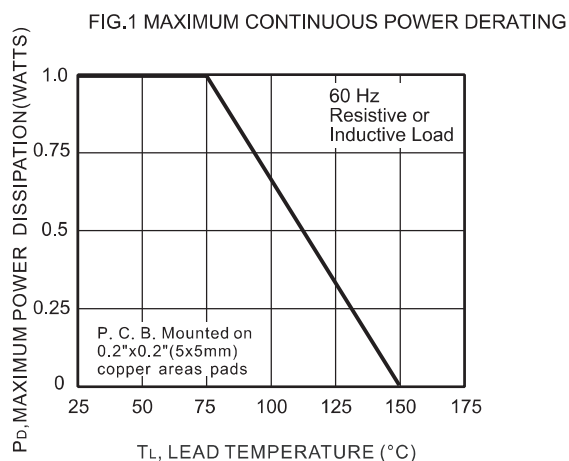
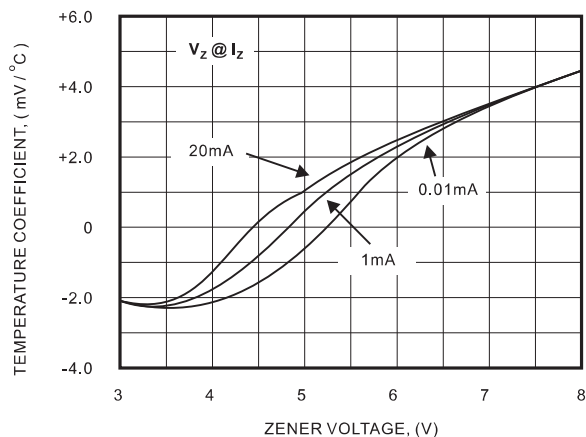
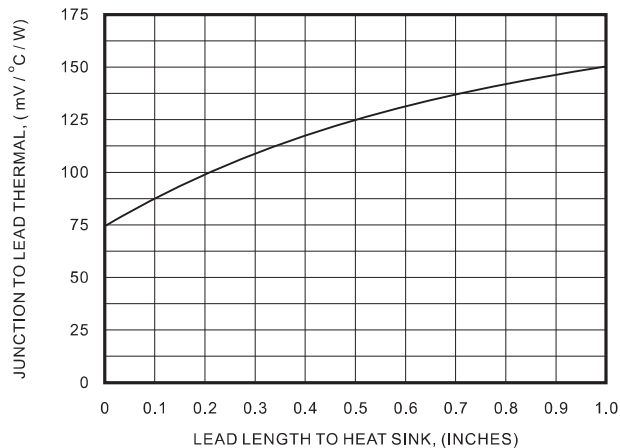


Fig. 3 Temperature Coefficients (-55 $^{\circ}\text{C}$ to +150 $^{\circ}\text{C}$ temperature change; 90% of the units are in the ranges indicated.)



Rating and characteristic curves (SMA4728A-Q1 THRU SMA4764A-Q1)

FIG.4 Typical Thermal Resistance versus Lead

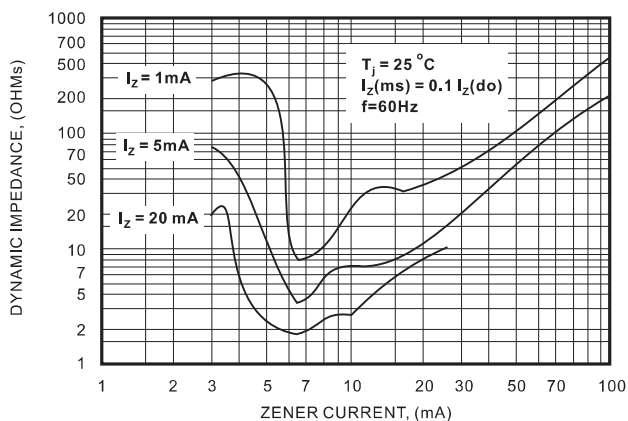


Fig 5. Effect of Zener Current

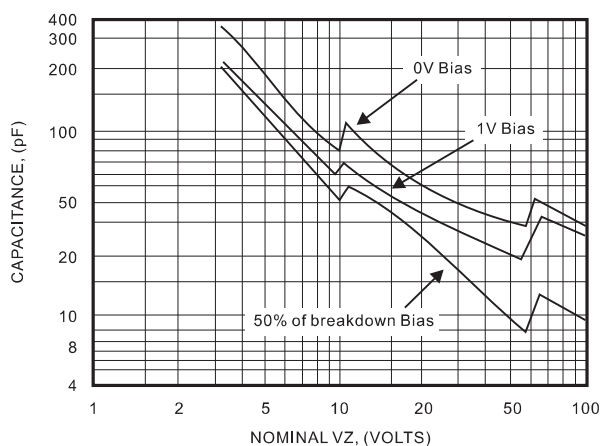
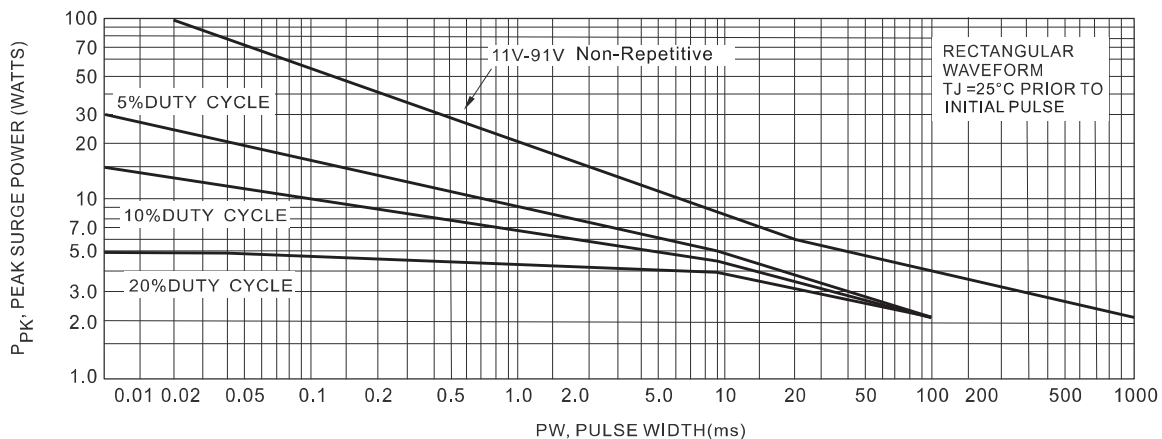


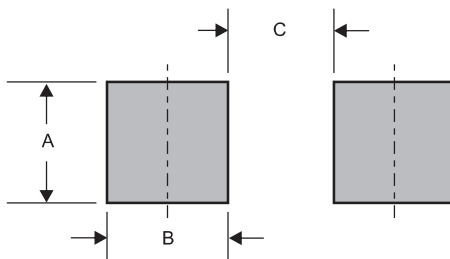
Fig 6. Maximum surge power



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)