

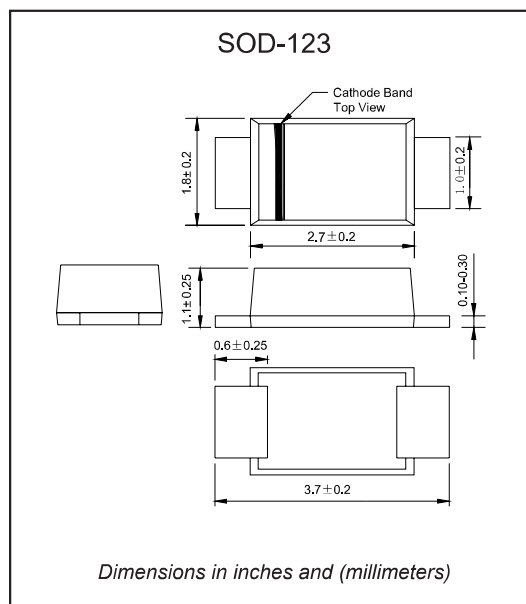
Features

- 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 SOD-123
- 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)	$R_{\theta JC}$ $R_{\theta JA}$		35 55		$^\circ\text{C/W}$
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	V _R	I _{Surge}
		Min.	Nom.	Max.	mA	(Ω)Max	(Ω)Max	mA	(uA)Max	Volts	mApk
SML4728A-Q1	Z3V3	3.14	3.3	3.47	76	10	400	1.00	100	1.0	1380
SML4729A-Q1	Z3V6	3.42	3.6	3.78	69	10	400	1.00	100	1.0	1260
SML4730A-Q1	Z3V9	3.71	3.9	4.10	64	9	400	1.00	50	1.0	1190
SML4731A-Q1	Z4V3	4.09	4.3	4.52	58	9	400	1.00	10	1.0	1070
SML4732A-Q1	Z4V7	4.47	4.7	4.94	53	8	500	1.00	10	1.0	970
SML4733A-Q1	Z5V1	4.85	5.1	5.36	49	7	550	1.00	10	1.0	890
SML4734A-Q1	Z5V6	5.32	5.6	5.88	45	5	600	1.00	10	2.0	810
SML4735A-Q1	Z6V2	5.89	6.2	6.51	41	2	700	1.00	10	3.0	730
SML4736A-Q1	Z6V8	6.46	6.8	7.14	37	3.5	700	1.00	10	4.0	660
SML4737A-Q1	Z7V5	7.13	7.5	7.88	34	4.0	700	0.50	10	5.0	605
SML4738A-Q1	Z8V2	7.79	8.2	8.61	31	4.5	700	0.50	10	6.0	550
SML4739A-Q1	Z9V1	8.65	9.1	9.56	28	5	700	0.50	10	7.0	500
SML4740A-Q1	Z10	9.50	10	10.50	25	7	700	0.25	10	7.6	454
SML4741A-Q1	Z11	10.45	11	11.55	23	8	700	0.25	5	8.4	414
SML4742A-Q1	Z12	11.40	12	12.60	21	9	700	0.25	5	9.1	380
SML4743A-Q1	Z13	12.35	13	13.65	19	10	700	0.25	5	9.9	344
SML4744A-Q1	Z15	14.25	15	15.75	17	14	700	0.25	5	11.4	304
SML4745A-Q1	Z16	15.20	16	16.80	15.5	16	700	0.25	5	12.2	285
SML4746A-Q1	Z18	17.10	18	18.90	14	20	750	0.25	5	13.7	250
SML4747A-Q1	Z20	19.00	20	21.00	12.5	22	750	0.25	5	15.2	225
SML4748A-Q1	Z22	20.90	22	23.10	11.5	23	750	0.25	5	16.7	205
SML4749A-Q1	Z24	22.80	24	25.20	10.5	25	750	0.25	5	18.2	190
SML4750A-Q1	Z27	25.65	27	28.35	9.5	35	750	0.25	5	20.6	170
SML4751A-Q1	Z30	28.50	30	31.50	8.5	40	1000	0.25	5	22.8	150
SML4752A-Q1	Z33	31.35	33	34.65	7.5	45	1000	0.25	5	25.1	135
SML4753A-Q1	Z36	34.20	36	37.80	7.0	50	1000	0.25	5	27.4	125
SML4754A-Q1	Z39	37.05	39	40.95	6.5	60	1000	0.25	5	29.7	115
SML4755A-Q1	Z43	40.85	43	45.15	6.0	70	1500	0.25	5	32.7	110
SML4756A-Q1	Z47	44.65	47	49.35	5.5	80	1500	0.25	5	35.8	95
SML4757A-Q1	Z51	48.45	51	53.55	5.0	95	1500	0.25	5	38.8	90
SML4758A-Q1	Z56	53.20	56	58.80	4.5	110	2000	0.25	5	42.6	80
SML4759A-Q1	Z62	58.90	62	65.10	4.0	125	2000	0.25	5	47.1	70
SML4760A-Q1	Z68	64.60	68	71.40	3.7	150	2000	0.25	5	51.7	65
SML4761A-Q1	Z75	71.25	75	78.75	3.3	175	2000	0.25	5	56.0	60
SML4762A-Q1	Z82	77.90	82	86.10	3.0	200	3000	0.25	5	62.2	55
SML4763A-Q1	Z91	86.45	91	95.55	2.8	250	3000	0.25	5	69.2	50
SML4764A-Q1	Z100	95.00	100	105.0	2.5	350	3000	0.25	5	76.0	45
SML1110A-Q1	Z110	104.5	110	115.5	2.3	450	4000	0.25	5	83.6	40
SML1120A-Q1	Z120	114.0	120	126.0	2.0	550	4500	0.25	5	91.2	37
SML1130A-Q1	Z130	123.5	130	136.5	1.9	700	5000	0.25	5	98.8	34
SML1150A-Q1	Z150	142.5	150	157.5	1.7	1000	6000	0.25	5	114.0	30
SML1160A-Q1	Z160	152.0	160	168.0	1.6	1100	6500	0.25	5	121.6	28
SML1180A-Q1	Z180	171.0	180	189.0	1.4	1200	7000	0.25	5	136.8	25
SML1200A-Q1	Z200	190.0	200	210.0	1.2	1900	9990	0.25	5	152.0	22
SML1220A-Q1	Z220	209.0	220	231.0	1.0	1600	8000	0.25	5	167.2	20
SML1240A-Q1	Z240	228.0	240	252.0	0.9	1800	8500	0.25	5	182.4	19
SML1250A-Q1	Z250	237.5	250	262.5	0.9	2000	9000	0.25	5	190.0	18
SML1270A-Q1	Z270	256.5	270	283.5	0.8	2100	9000	0.25	5	205.0	16
SML1300A-Q1	Z300	285.0	300	315.0	0.8	2300	9500	0.25	5	228.0	15
SML1330A-Q1	Z330	313.5	330	346.5	0.7	2500	9500	0.25	5	250.2	13

Note : 5% tolerance of Zener voltage

Rating and characteristic curves

FIG.1 MAXIMUM CONTINUOUS POWER DERATING

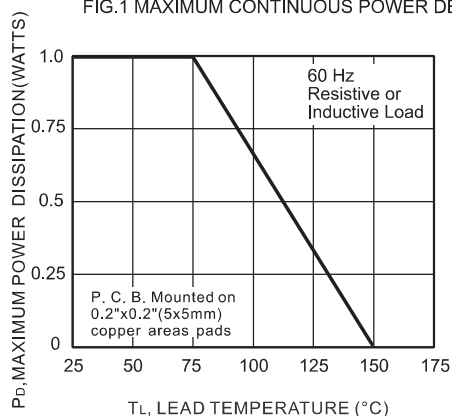


FIG.2A Range for Units to 12 Volts

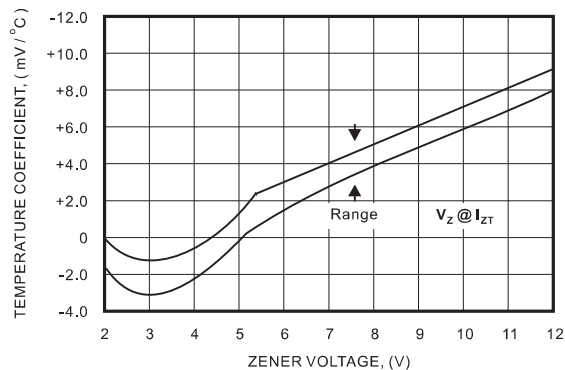


FIG.2B Range for Units to 12 to 100 Volts

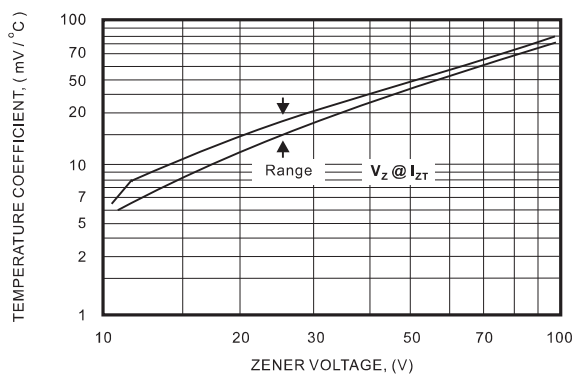
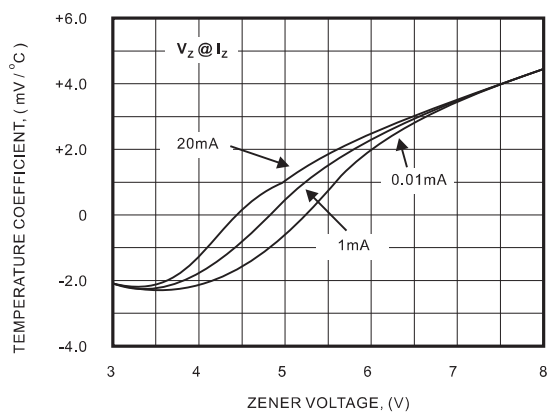
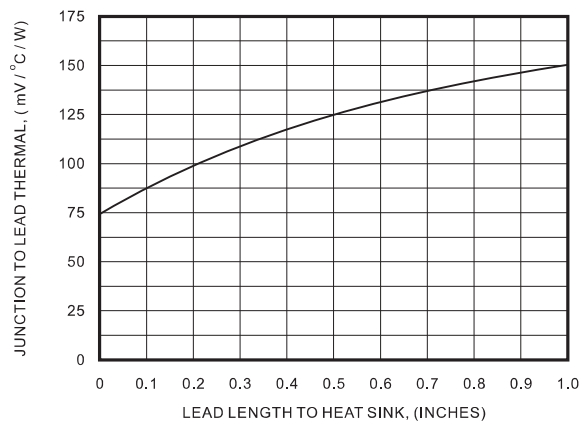


Fig. 3 Temperature Coefficients (-55 $^{\circ}\text{C}$ to +150 $^{\circ}\text{C}$ temperature change; 90% of the units are in the ranges indicated.)



Rating and characteristic curves

Fig 4. Effect of Zener Voltage

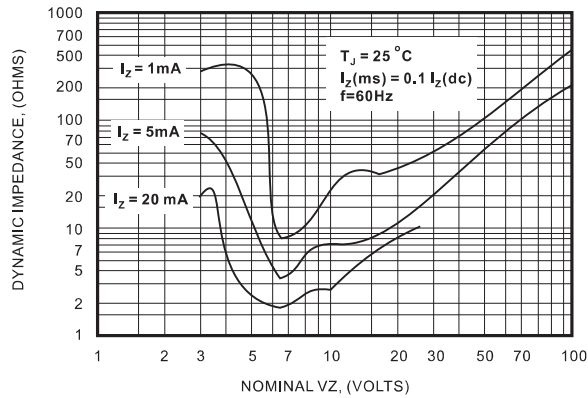


Fig 5. Effect of Zener Current

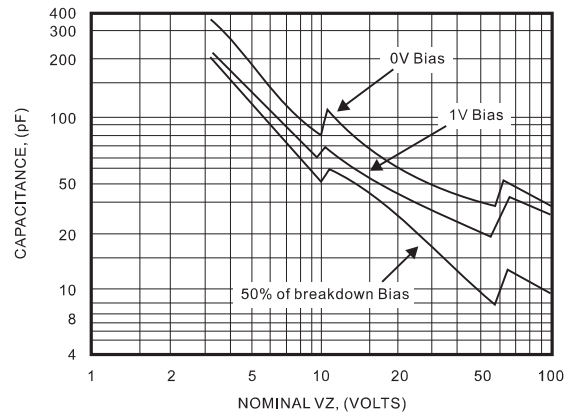
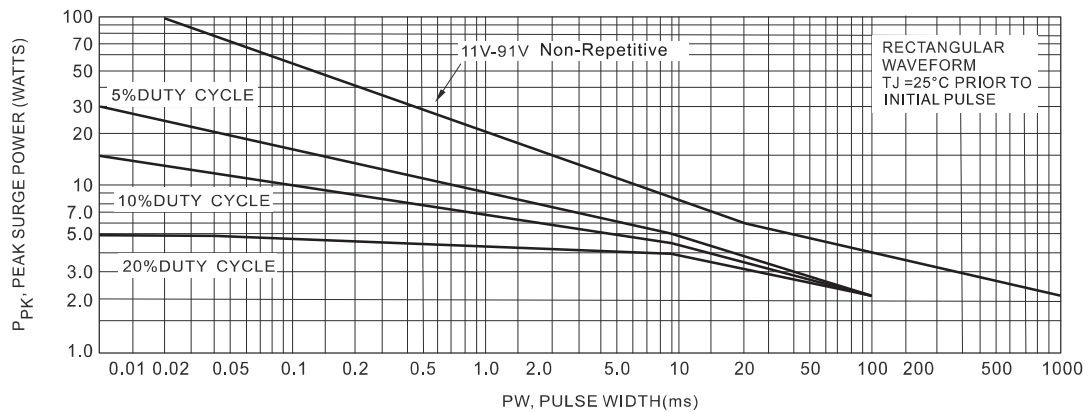


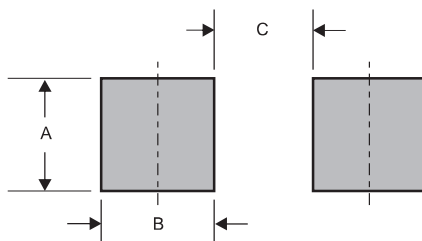
Fig 6. Maximum surge power



Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123	0.075 (1.90)	0.055 (1.40)	0.075 (1.90)