SMA47xxA SERIES

Surface Mount Zener Device

DO-214AC(SMA)

Features
• Glass passivated chip
• Low leakage
• Built-in strain relief
• Low inductance
• High peak reverse power dissipation
• Lead (Pb)-free component
• For use in stabilizing and clipping with high power rating

PrimaryCharacteristics	
V_{RRM}	3.3~330V
V_F	1.2V
T_J max	175°C

Mechani Mechanical Date
• Case: Molded plastic
• Epoxy: UL 94V-0 rate flame retardant
• Lead: Solderable per MIL-STD-750, method 2026
• Polarity: Color band denotes cathode end
• Mounting position: Any

Ordering Information

Part No.	Remark	Package	Packing
SMA47xxA	General	SMA	5000 / Tape & Reel
SMA47xxA-H	Halogen Free		
SMA47xxA-Q	AEC-Q101 qualified		

Maximum Ratings (TA=25°C unless otherwise noted)

Parameter	Symbol	Value	UNIT
DC Power Dissipation at T_L = 50°C (Note1)	P_D	1.0	W
Maximum Forward Voltage at I_F = 200 mA	V_F	1.2	V
Maximum Thermal Resistance Junction to Ambient Air (Note2)	$R_{\theta JA}$	170	K / W
Junction Temperature Range	T_J	- 55 to + 175	°C
Storage Temperature Range	T_{STG}	- 55 to + 175	°C

Note:

(1) T_L = Lead temperature at 3/8 " (9.5mm) from body.

(2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.

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Part Number	Nominal Zener Voltage		Max. Zener Impedance				Max. Reverse Leakage Current		Max. DC Zener Current	Max. Surge Current	Marking Code
	V_Z @ I_{ZT}		Z_{ZT} @ I_{ZT}		Z_{ZK} @ I_{ZK}		I_R @ V_R		I_{ZM}	I_{RM}	
	Nom. V	mA	Ω	mA	Ω	mA	uA	V	mA	mApk	
SMA4728A	3.3	76.0	10.0	76.0	400	1.00	100.0	1.0	274.0	1370	28A
SMA4729A	3.6	69.0	10.0	69.0	400	1.00	100.0	1.0	251.0	1255	29A
SMA4730A	3.9	64.0	9.0	64.0	400	1.00	50.0	1.0	232.0	1160	30A
SMA4731A	4.3	58.0	9.0	58.0	400	1.00	10.0	1.0	210.0	1050	31A
SMA4732A	4.7	53.0	8.0	53.0	500	1.00	10.0	1.0	192.0	960	32A
SMA4733A	5.1	49.0	7.0	49.0	550	1.00	10.0	1.0	177.0	885	33A
SMA4734A	5.6	45.0	5.0	45.0	600	1.00	10.0	2.0	161.0	805	34A
SMA4735A	6.2	41.0	2.0	41.0	700	1.00	10.0	3.0	146.0	730	35A
SMA4736A	6.8	37.0	3.5	37.0	700	1.00	5.0	4.0	133.0	660	36A
SMA4737A	7.5	34.0	4.0	34.0	700	0.50	5.0	5.0	121.0	605	37A
SMA4738A	8.2	31.0	4.5	31.0	700	0.50	5.0	6.0	110.0	550	38A
SMA4739A	9.1	28.0	5.0	28.0	700	0.50	0.5	7.0	100.0	500	39A
SMA4740A	10.0	25.0	7.0	25.0	700	0.25	0.5	7.6	91.0	454	40A
SMA4741A	11.0	23.0	8.0	23.0	700	0.25	0.5	8.4	83.0	414	41A
SMA4742A	12.0	21.0	9.0	21.0	700	0.25	0.5	9.1	76.0	380	42A
SMA4743A	13.0	19.0	10.0	19.0	700	0.25	0.5	9.9	69.0	344	43A
SMA4744A	15.0	17.0	14.0	17.0	700	0.25	0.5	11.4	61.0	305	44A
SMA4745A	16.0	15.5	16.0	15.5	700	0.25	0.5	12.2	57.0	285	45A
SMA4746A	18.0	14.0	20.0	14.0	750	0.25	0.5	13.7	50.0	250	46A
SMA4747A	20.0	12.5	22.0	12.5	750	0.25	0.5	15.2	45.0	225	47A
SMA4748A	22.0	11.5	23.0	11.5	750	0.25	0.5	16.7	41.0	205	48A
SMA4749A	24.0	10.5	25.0	10.5	750	0.25	0.5	18.2	38.0	190	49A
SMA4750A	27.0	9.5	35.0	9.5	750	0.25	0.5	20.6	34.0	170	50A
SMA4751A	30.0	8.5	40.0	8.5	1000	0.25	0.5	22.8	30.0	150	51A
SMA4752A	33.0	7.5	45.0	7.5	1000	0.25	0.5	25.1	27.0	135	52A
SMA4753A	36.0	7.0	50.0	7.0	1000	0.25	0.5	27.4	25.0	125	53A
SMA4754A	39.0	6.5	60.0	6.5	1000	0.25	0.5	29.7	23.0	115	54A
SMA4755A	43.0	6.0	70.0	6.0	1500	0.25	0.5	32.7	22.0	110	55A
SMA4756A	47.0	5.5	80.0	5.5	1500	0.25	0.5	35.8	19.0	95	56A
SMA4757A	51.0	5.0	95.0	5.0	1500	0.25	0.5	38.8	18.0	90	57A
SMA4758A	56.0	4.5	110.0	4.5	2000	0.25	0.5	42.6	16.0	80	58A
SMA4759A	62.0	4.0	125.0	4.0	2000	0.25	0.5	47.1	14.0	70	59A
SMA4760A	68.0	3.7	150.0	3.7	2000	0.25	0.5	51.7	13.0	65	60A
SMA4761A	75.0	3.3	175.0	3.3	2000	0.25	0.5	56.0	12.0	60	61A
SMA4762A	82.0	3.0	200.0	3.0	3000	0.25	0.5	62.2	11.0	55	62A
SMA4763A	91.0	2.8	250.0	2.8	3000	0.25	0.5	69.2	10.0	50	63A
SMA4764A	100.0	2.5	350.0	2.5	3000	0.25	0.5	76.0	9.0	45	64A
SZ1110A	110.0	2.3	450.0	2.3	4000	0.25	0.5	83.6	8.6	40	11Z
SZ1120A	120.0	2.0	550.0	2.0	4500	0.25	0.5	91.2	7.8	37	12Z

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	V_Z @ I_{ZT}		Z_{ZT} @ I_{ZT}		Z_{ZK} @ I_{ZK}		I_R @ V_R		I_{ZM}	I_{RM}	
	Nom. V	mA	Ω	mA	Ω	mA	uA	V	mA	mApk	
SZ1130A	130.0	1.9	700.0	1.9	5000	0.25	0.5	98.8	7.0	34	13Z
SZ1150A	150.0	1.7	1000.0	1.7	6000	0.25	0.5	114.0	6.4	30	15Z
SZ1160A	160.0	1.6	1100.0	1.6	6500	0.25	0.5	121.6	5.8	28	16Z
SZ1180A	180.0	1.4	1200.0	1.4	7000	0.25	0.5	136.8	5.2	25	18Z
SZ1200A	200.0	1.2	1900.0	1.2	9990	0.25	0.5	152.0	4.7	22	20Z
SZ1220A	220.0	1.0	1600.0	1.0	8000	0.25	0.5	167.2	4.0	20	22Z
SZ1240A	240.0	0.9	1800	0.9	8500	0.25	0.5	182.4	3.8	19	24Z
SZ1250A	250.0	0.9	2000	0.9	9000	0.25	0.5	190.0	3.6	18	25Z
SZ1270A	270.0	0.8	2100	0.8	9000	0.25	0.5	205.0	3.3	16	27Z
SZ1300A	300.0	0.8	2300	0.8	9500	0.25	0.5	228.0	3.0	15	30Z
SZ1330A	330.0	0.7	2500	0.7	9500	0.25	0.5	250.2	2.7	13	33Z

Note:

(1) The type number listed have a standard tolerance on the nominal zener voltage of ± 5%

(2) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC Method.

Rating and Characteristics Curves

Fig. 1 - Power Temperature Derating Curve

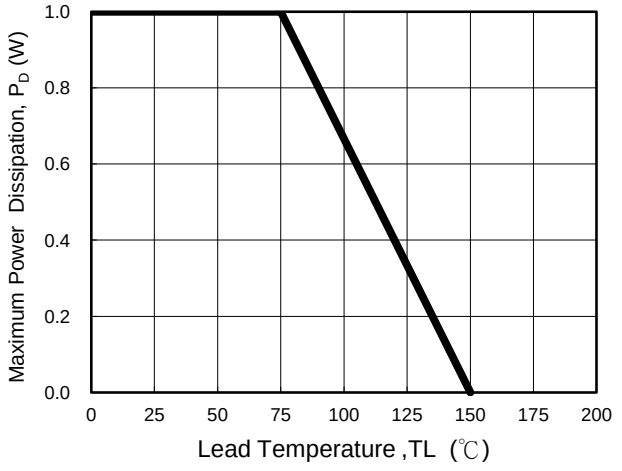


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

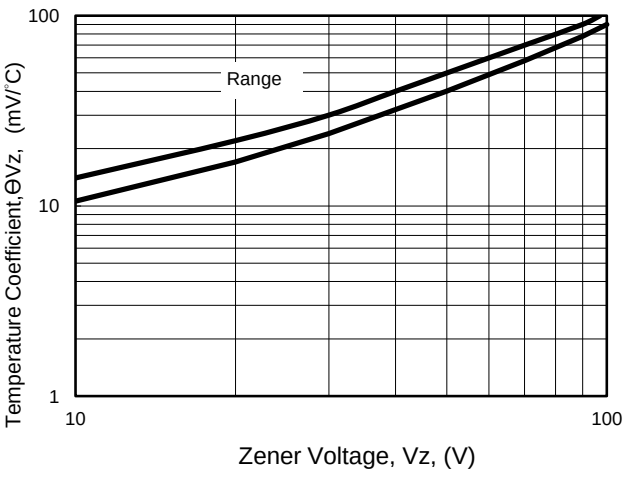


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

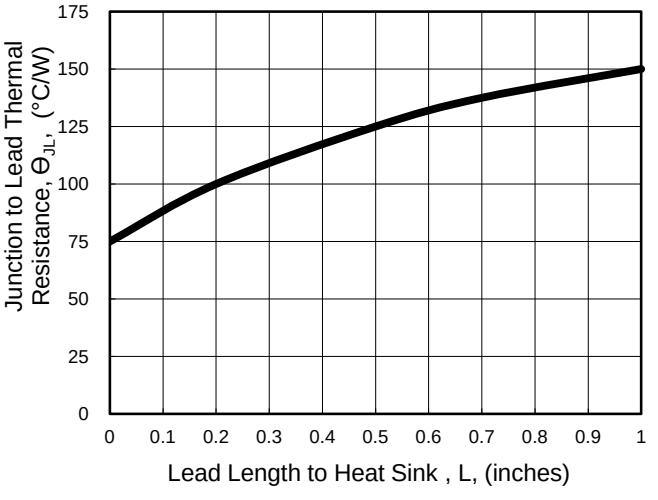
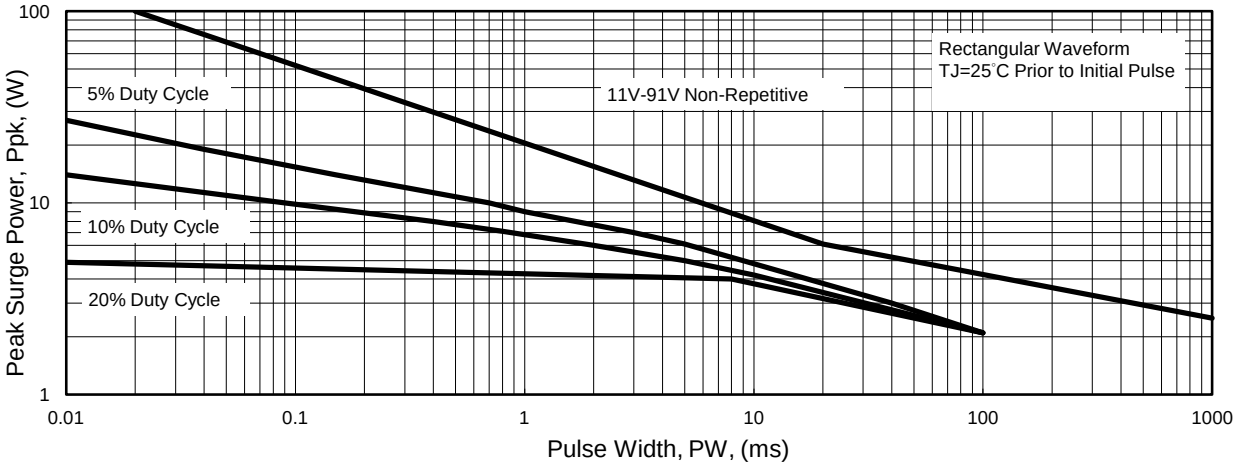
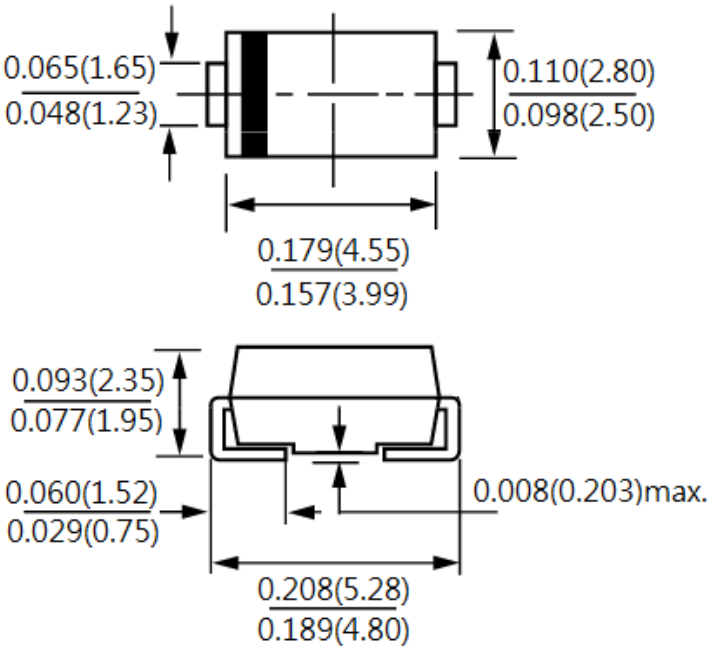


Fig. 4 - Maximum Surge Power



Package Outline Dimensions



SMA

Dimensions in inches and (millimeters)