

Zener Diodes DO-214AC SMA

SMA4728A~SZ1330A

MERITEK

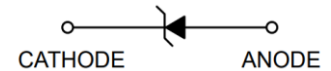
FEATURE

- Zener Voltage Range: 3.3V to 330V
- Zener Voltage Tolerance: $\pm 5\%$
- Power Dissipation: 1W
- Glass Passivation Junction
- Built-in Strain Relief
- High Peak Reverse Power Dissipation, Low Inductance



MECHANICAL DATA

- Flammability Classification Rating UL 94V-0
- Solderable per MIL-STD-750, Method 2026
- Polarity: Color Band Denoted Cathode End



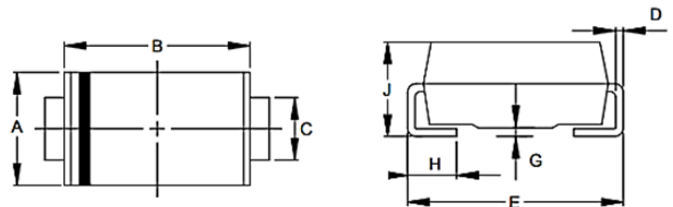
ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
DC Power Dissipation at $T_L = 75^\circ\text{C}$	P_D	1.0	W
Maximum Forward Voltage at $I_F = 200\text{mA}$	V_F	1.2	V
Maximum Thermal Resistance Junction To Ambient Air	$R_{\theta JA}$	170	$^\circ\text{C/W}$
Junction Temperature Range	T_J	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

Note: $T_A = 25^\circ\text{C}$ unless otherwise noted

DIMENSIONS

Item	DO-214AC (SMA)	
	Min (mm)	Max (mm)
A	2.51	2.76
B	4.10	4.55
C	1.23	1.63
D	0.15	0.30
E	4.87	5.22
G	0.00	0.20
H	0.75	1.51
J	1.96	2.26



ELECTRICAL CHARACTERISTICS

Part Number	Nominal Zener Voltage		Maximum Zener Impedance			Max Reverse Leakage Current		Max Zener Current	Max Surge Current
	$V_Z @ I_{ZT}$	I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	$I_R @ V_R$		I_{ZM}	I_{RM}
	V	mA	Ω	Ω	mA	μA	V	mA	mApk
SMA4728A	3.3	76.0	10.0	400	1.0	100	1.0	274	1370
SMA4729A	3.6	69.0	10.0	400	1.0	100	1.0	251	1255
SMA4730A	3.9	64.0	9.0	400	1.0	50.0	1.0	232	1160
SMA4731A	4.3	58.0	9.0	400	1.0	10.0	1.0	210	1050
SMA4732A	4.7	53.0	8.0	500	1.0	10.0	1.0	192	960
SMA4733A	5.1	49.0	7.0	550	1.0	10.0	1.0	177	885
SMA4734A	5.6	45.0	5.0	600	1.0	10.0	2.0	161	805

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	$V_Z @ I_{ZT}$	I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	$I_R @ V_R$		I_{ZM}	I_{RM}
	V	mA	Ω	Ω	mA	μA	V	mA	mApk
SMA4735A	6.2	41.0	2.0	700	1.0	10.0	3.0	146	730
SMA4736A	6.8	37.0	3.5	700	1.0	5.0	4.0	133	660
SMA4737A	7.5	34.0	4.0	700	0.5	5.0	5.0	121	605
SMA4738A	8.2	31.0	4.5	700	0.5	5.0	6.0	110	550
SMA4739A	9.1	28.0	5.0	700	0.5	0.5	7.0	100	500
SMA4740A	10.0	25.0	7.0	700	0.25	0.5	7.6	91.0	454
SMA4741A	11.0	23.0	8.0	700	0.25	0.1	8.4	83.0	414
SMA4742A	12.0	21.0	9.0	700	0.25	0.1	9.1	76.0	380
SMA4743A	13.0	19.0	10.0	700	0.25	0.1	9.9	69.0	344
SMA4744A	15.0	17.0	14.0	700	0.25	0.1	11.4	61.0	305
SMA4745A	16.0	15.5	16.0	700	0.25	0.1	12.2	57.0	285
SMA4746A	18.0	14.0	20.0	750	0.25	0.1	13.7	50.0	250
SMA4747A	20.0	12.5	22.0	750	0.25	0.1	15.2	45.0	225
SMA4748A	22.0	11.5	23.0	750	0.25	0.1	16.7	41.0	205
SMA4749A	24.0	10.5	25.0	750	0.25	0.1	18.2	38.0	190
SMA4750A	27.0	9.5	35.0	750	0.25	0.1	20.6	34.0	170
SMA4751A	30.0	8.5	40.0	1000	0.25	0.1	22.8	30.0	150
SMA4752A	33.0	7.5	45.0	1000	0.25	0.1	25.1	27.0	135
SMA4753A	36.0	7.0	50.0	1000	0.25	0.1	27.4	25.0	125
SMA4754A	39.0	6.5	60.0	1000	0.25	0.1	29.7	23.0	115
SMA4755A	43.0	6.0	70.0	1500	0.25	0.1	32.7	22.0	110
SMA4756A	47.0	5.5	80.0	1500	0.25	0.1	35.8	19.0	95
SMA4757A	51.0	5.0	95.0	1500	0.25	0.1	38.8	18.0	90
SMA4758A	56.0	4.5	110	2000	0.25	0.1	42.6	16.0	80
SMA4759A	62.0	4.0	125	2000	0.25	0.1	47.1	14.0	70
SMA4760A	68.0	3.7	150	2000	0.25	0.1	51.7	13.0	65
SMA4761A	75.0	3.3	175	2000	0.25	0.1	56.0	12.0	60
SMA4762A	82.0	3.0	200	3000	0.25	0.1	62.2	11.0	55
SMA4763A	91.0	2.8	250	3000	0.25	0.1	69.2	10.0	50
SMA4764A	100	2.5	350	3000	0.25	0.1	76.0	9.0	45
SZ1110A	110	2.3	450	4000	0.25	0.1	83.6	8.6	40
SZ1120A	120	2.0	550	4500	0.25	0.1	91.2	7.8	37
SZ1130A	130	1.9	700	5000	0.25	0.1	98.8	7.0	34
SZ1150A	150	1.7	1000	6000	0.25	0.1	114.0	6.4	30
SZ1160A	160	1.6	1100	6500	0.25	0.1	121.6	5.8	28
SZ1180A	180	1.4	1200	7000	0.25	0.1	136.8	5.2	25
SZ1200A	200	1.2	1900	9990	0.25	0.1	152.0	4.7	22
SZ1220A	220	1.0	1600	8000	0.25	0.1	167.2	4.0	20
SZ1240A	240	0.9	1800	8500	0.25	0.1	182.4	3.8	19
SZ1250A	250	0.9	2000	9000	0.25	0.1	190.0	3.6	18
SZ1270A	270	0.8	2100	9000	0.25	0.1	205.0	3.3	16
SZ1300A	300	0.8	2300	9500	0.25	0.1	228.0	3.0	15
SZ1330A	330	0.7	2500	9500	0.25	0.1	250.2	2.7	13

Note:

1. $T_A = 25^\circ C$ unless otherwise noted
2. Standard tolerance on the nominal Zener voltage: $\pm 5\%$
3. 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

CHARACTERISTIC CURVES

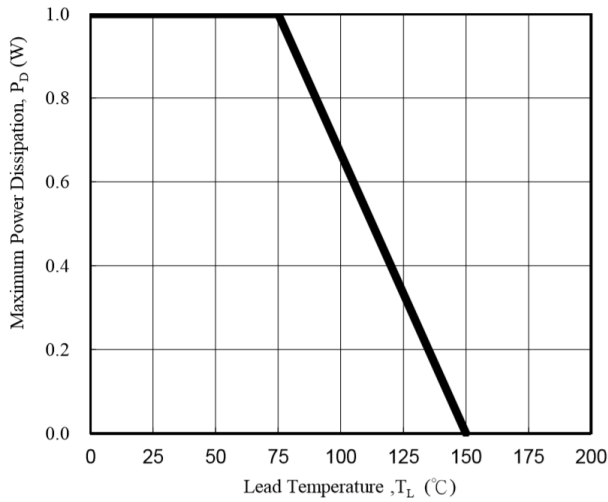


Fig. 1 - Power Temperature Derating Curve

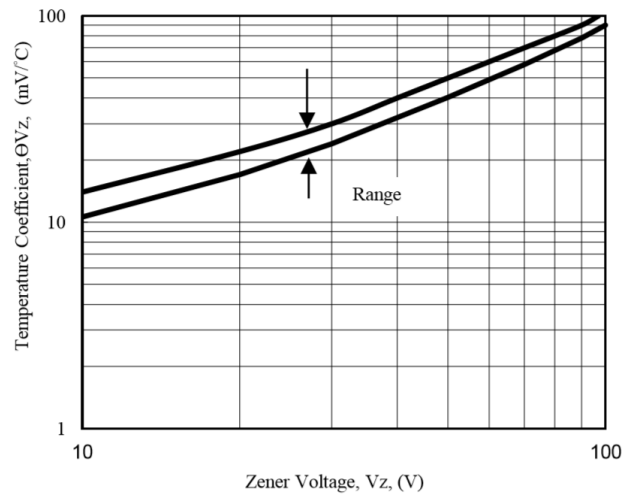


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

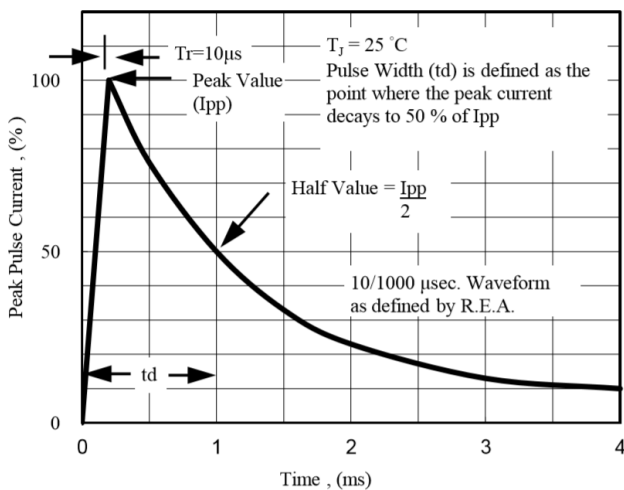


Fig. 3 - Pulse Waveform

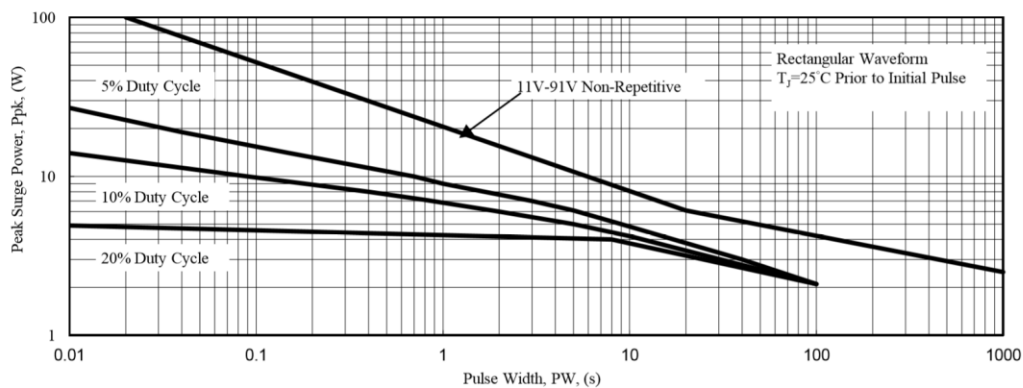


Fig. 4 - Maximum Surge Power

*Specifications subject to change without notice