SEMICONDUCTOR

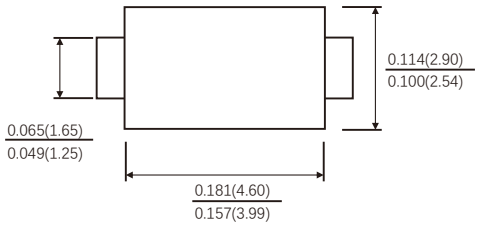
SMA4728A THRU SMA4764A

1W SILICON PLANAR ZENER DIODES

FEATURES

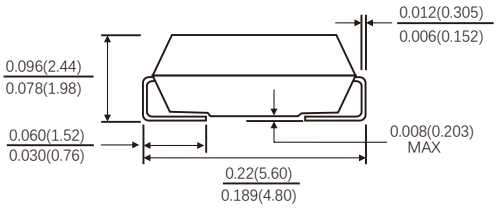
- Low leakage, low zener impedance at low current
- Maximum power dissipation of 1W is ideally suited for stabilized power supply, etc.
- High temperature soldering guaranteed:260°C/10 seconds at terminals

SMA(DO-214AC)



MECHANICAL DATA

- Case: JEDEC DO-214ACpackage are upon request.
- Terminals: Solder plated
- Polarity: Color band denotes cathode end



ABSOLUTE MAXIMUM RATINGS(LIMITING VALUES) (T_A =25 ℃)

	Symbols	*Value*	*Units*
Zener current see table "Characteristics"			
Power dissipation	P_D	1	W
Junction temperature	T_J	150	°C
Storage temperature range	T_{STG}	-55 to+150	°C

ELECTRICAL CHARACTERISTICS (T_A =25 ℃)

	Symbols	*Min*	*Typ*	*Max*	*Units*
Thermal resistance junction to ambient	$R_{\theta JA}$			100 [1)]	℃/W
Forward voltage at I_F =200mA	V_F			1.2	V
1) Thermal resistance from junction to terminal mounted on 5X5mm copper pad area.					

Electrical Characteristics (T_A=25℃ Unless otherwise specified)

Part Number	Zener Voltage		Dynamic impedance	Knee current	Knee impedance	Reverse current	Reverse voltage	Max.DC current
	V_Z	I_{ZT}	Z_{ZT}@I_{ZT}	I_{ZK}	Z_{ZK}@I_{ZK}	I_R(Max.) @V_R		I_{ZM}
	V	m A	Ω	m A	Ω	μA	V	m A
SMA4728A	3.3	76.0	10.0	1	400	100	1.0	276
SMA4729A	3.6	69.0	10.0	1	400	100	1.0	252
SMA4730A	3.9	64.0	9.0	1	400	50	1.0	234
SMA4731A	4.3	58.0	9.0	1	400	10	1.0	217
SMA4732A	4.7	53.0	8.0	1	500	10	1.5	193
SMA4733A	5.1	49.0	7.0	1	550	10	2.0	178
SMA4734A	5.6	45.0	5.0	1	600	10	3.0	162
SMA4735A	6.2	41.0	2.0	1	700	10	4.0	146
SMA4736A	6.8	37.0	3.5	1	700	10	5.2	133
SMA4737A	7.5	34.0	4.0	0.5	700	10	6.0	121
SMA4738A	8.2	31.0	4.5	0.5	700	10	6.5	110
SMA4739A	9.1	28.0	5.0	0.5	700	10	7.0	100
SMA4740A	10	25.0	7.0	0.25	700	10	8.0	91
SMA4741A	11	23.0	8.0	0.25	700	5	8.4	83
SMA4742A	12	21.0	9.0	0.25	700	5	9.1	76
SMA4743A	13	19.0	10.0	0.25	700	5	9.9	69
SMA4744A	15	17.0	14.0	0.25	700	5	11.4	61
SMA4745A	16	15.5	16.0	0.25	700	5	12.2	57
SMA4746A	18	14.0	20.0	0.25	750	5	13.7	50
SMA4747A	20	12.5	22.0	0.25	750	5	15.2	45
SMA4748A	22	11.5	23.0	0.25	750	5	16.7	41
SMA4749A	24	10.5	25.0	0.25	750	5	18.2	38
SMA4750A	27	9.5	35.0	0.25	750	5	20.6	34
SMA4751A	30	8.5	40.0	0.25	1000	5	22.8	30
SMA4752A	33	7.5	45.0	0.25	1000	5	25.1	27

Part Number	Zener Voltage		Dynamic impedance	Knee current	Knee impedance	Reverse current	Reverse voltage	Max.DC current
	V_Z	I_{ZT}	$Z_{ZT}@I_{ZT}$	I_{ZK}	$Z_{ZK}@I_{ZK}$	I_R(Max.) @V_R		I_{ZM}
	V	m A	Ω	m A	Ω	μA	V	m A
SMA4753A	36	7.0	50.0	0.25	1000	5	27.4	25
SMA4754A	39	6.5	60.0	0.25	1000	5	29.7	23
SMA4755A	43	6.0	70.0	0.25	1500	5	32.7	22
SMA4756A	47	5.5	80.0	0.25	1500	5	35.8	19
SMA4757A	51	5.0	95.0	0.25	1500	5	38.8	18
SMA4758A	56	4.5	110.0	0.25	2000	5	42.6	16
SMA4759A	62	4.0	125.0	0.25	2000	5	47.1	14
SMA4760A	68	3.7	150.0	0.25	2000	5	51.7	13
SMA4761A	75	3.3	175.0	0.25	2000	5	56.0	12
SMA4762A	82	3.0	200.0	0.25	3000	5	62.2	11
SMA4763A	91	2.8	250.0	0.25	3000	5	69.2	10
SMA4764A	100	2.5	350.0	0.25	3000	5	76.0	9

Suffix “A” is for ±5% tolerance.

RATINGS AND CHARACTERISTIC CURVES

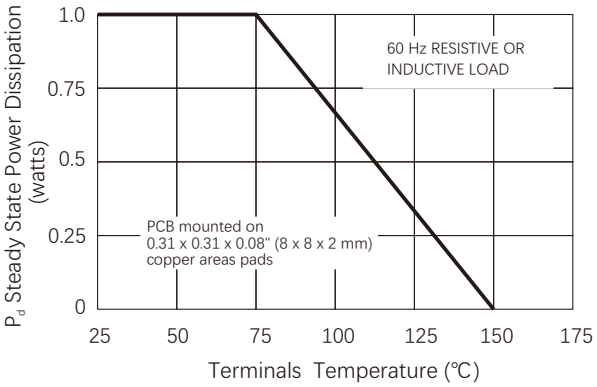


Fig.1-Power Temperate Derating Curve

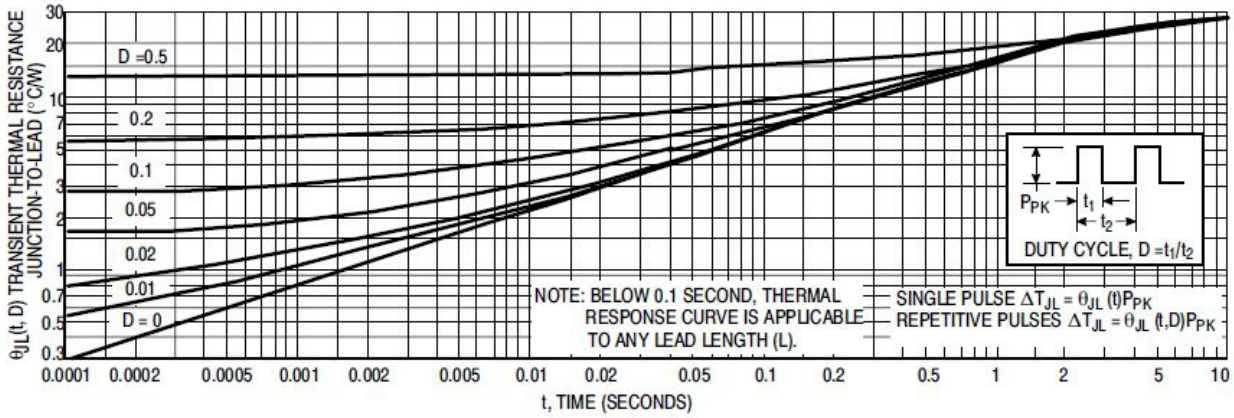


Figure 2. Typical Thermal Response L, Lead Length = 3/8 Inch

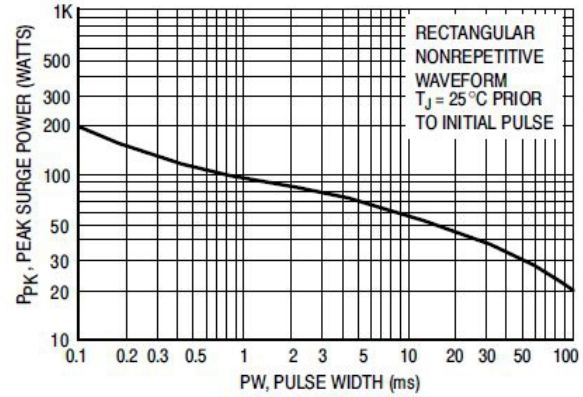


Figure 3. Maximum Surge Power