



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**SMA4728A  
THRU  
SMA4771A**

**TECHNICAL SPECIFICATIONS OF SILICON PLANAR POWER ZENER DIODES**

**VOLTAGE RANGE - 3.3 to 200 Volts**

**POWER - 1.0 Watt**

**FEATURES**

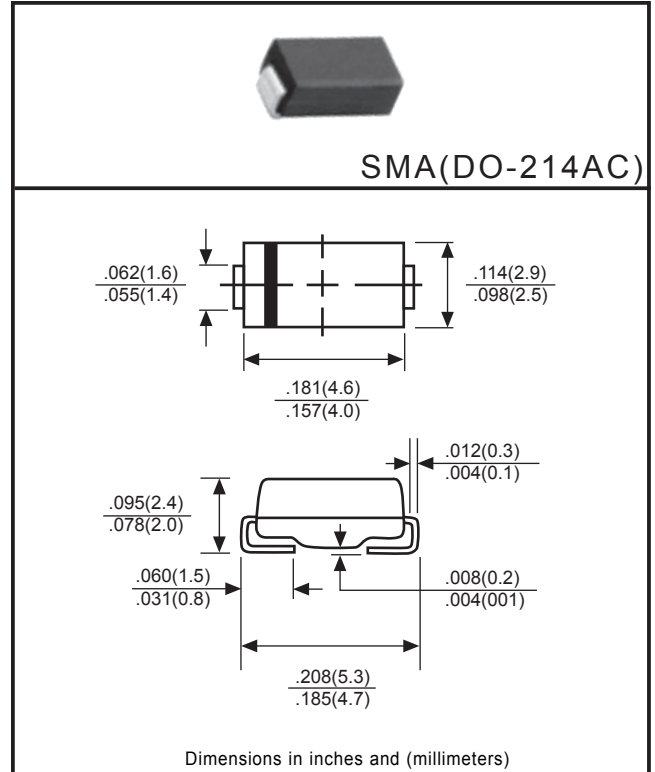
- \* Voltage range : 3.3V to 200V
- \* Low zener impedance
- \* Low regulation factor
- \* High reliability
- \* Glass passivated junction

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL-94-0 rate flame retardant
- \* Terminals: Solder plated solderable per MIL-STD-750, Method 2026
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 0.064 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.



	SYMBOL	VALUE	UNITS
Maximum Power Dissipation at $T_L = 75^\circ\text{C}$ (Note 1)	$P_{tot}$	1.0	W
Maximum Instantaneous Forward Voltage at $I_F = 200\text{ mA}$	$V_F$	1.2	Volts
Typical Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	170	$^\circ\text{C/W}$
Junction Temperature Range	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

Note 1 : Suffix "A" indicates Zener Voltage Tolerance  $\pm 5\%$

FIG. 1  
TYPICAL FORWARD CURRENT  
DERATING CURVE

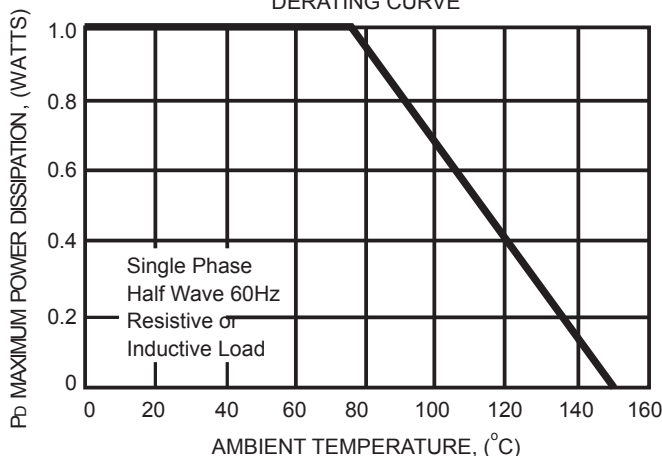
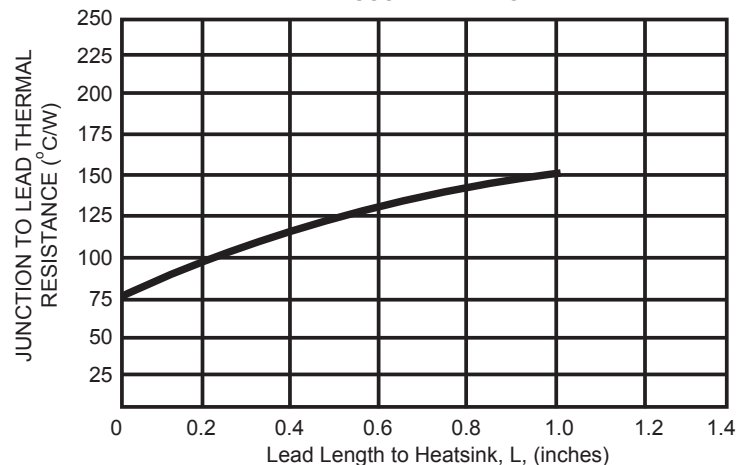


FIG. 2  
TYPICAL THERMAL RESISTANCE  
VERSUS LEAD LENGTH



## RATING AND CHARACTERISTIC CURVES (SMA4728A THRU SMA4771A)

TYPE	Nominal Zener Voltage	Zener Test Current	Maximum Zener Impedance		IZK	Maximum Reverse Leakage Current	
	V <sub>Z</sub> @I <sub>ZT</sub>	I <sub>ZT</sub>	Z <sub>ZT</sub> @I <sub>ZT</sub>	Z <sub>ZK</sub> @I <sub>ZK</sub>		I <sub>R</sub>	@V <sub>R</sub>
	Volts	mA	Ohms	Ohms	mA	μA	Volts
SMA4728A	3.3	76	10	400	1.0	100	1.0
SMA4729A	3.6	69	10	400	1.0	100	1.0
SMA4730A	3.9	64	9.0	400	1.0	50	1.0
SMA4731A	4.3	58	9.0	400	1.0	10	1.0
SMA4732A	4.7	53	8.0	500	1.0	10	1.0
SMA4733A	5.1	49	7.0	550	1.0	10	1.0
SMA4734A	5.6	45	5.0	600	1.0	10	2.0
SMA4735A	6.2	41	2.0	700	1.0	10	3.0
SMA4736A	6.8	37	3.5	700	1.0	10	4.0
SMA4737A	7.5	34	4.0	700	0.5	10	5.0
SMA4738A	8.2	31	4.5	700	0.5	10	6.0
SMA4739A	9.1	28	5.0	700	0.5	10	7.0
SMA4740A	10.0	25	7.0	700	0.25	10	7.6
SMA4741A	11.0	23	8.0	700	0.25	5.0	8.4
SMA4742A	12.0	21	9.0	700	0.25	5.0	9.1
SMA4743A	13.0	19	10	700	0.25	5.0	9.9
SMA4744A	15.0	17	14	700	0.25	5.0	11.4
SMA4745A	16.0	15.5	16	700	0.25	5.0	12.2
SMA4746A	18.0	14	20	750	0.25	5.0	13.7
SMA4747A	20.0	12.5	22	750	0.25	5.0	15.2
SMA4748A	22.0	11.5	23	750	0.25	5.0	16.7
SMA4749A	24.0	10.5	25	750	0.25	5.0	18.2
SMA4750A	27.0	9.5	35	750	0.25	5.0	20.6
SMA4751A	30.0	8.5	40	1000	0.25	5.0	22.8
SMA4752A	33.0	7.5	45	1000	0.25	5.0	25.1
SMA4753A	36.0	7.0	50	1000	0.25	5.0	27.4
SMA4754A	39.0	6.5	60	1000	0.25	5.0	29.7
SMA4755A	43.0	6.0	70	1500	0.25	5.0	32.7
SMA4756A	47.0	5.5	80	1500	0.25	5.0	35.8
SMA4757A	51.0	5.0	95	1500	0.25	5.0	38.8
SMA4758A	56.0	4.5	110	2000	0.25	5.0	42.6

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	V <sub>Z@I<sub>ZT</sub></sub>	I <sub>ZT</sub>	Z <sub>ZT@I<sub>ZT</sub></sub>	Z <sub>ZK@I<sub>ZK</sub></sub>		I <sub>R</sub>	@V <sub>R</sub>
	Volts	mA	Ohms	Ohms	mA	μA	Volts
SMA4759A	62.0	4.0	125	2000	0.25	5.0	47.1
SMA4760A	68.0	3.7	150	2000	0.25	5.0	51.7
SMA4761A	75.0	3.3	175	2000	0.25	5.0	56.0
SMA4762A	82.0	3.0	200	3000	0.25	5.0	62.2
SMA4763A	91.0	2.8	250	3000	0.25	5.0	69.2
SMA4764A	100	2.5	350	3000	0.25	5.0	76.0
SMA4765A	110	2.3	450	4000	0.25	5.0	83.6
SMA4766A	120	2.0	550	4500	0.25	5.0	91.2
SMA4767A	130	1.9	700	5000	0.25	5.0	98.8
SMA4768A	150	1.7	1000	6000	0.25	5.0	114.0
SMA4769A	160	1.6	1100	6500	0.25	5.0	121.6
SMA4770A	180	1.4	1200	7000	0.25	5.0	136.8
SMA4771A	200	1.2	1900	9990	0.25	5.0	152.0

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