



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

SMAF4728A

THRU

SMAF4771A

TECHNICAL SPECIFICATIONS OF SILICON PLANAR POWER ZENER DIODES

VOLTAGE RANGE - 3.3 to 200 Volts

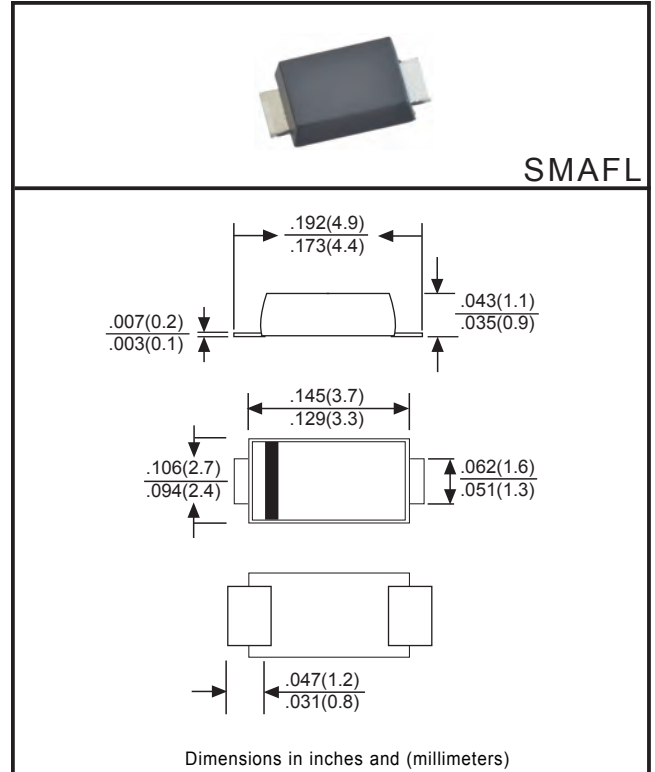
POWER - 1.0 Watt

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°C (Note 1)	P _{tot}	1.0	W
Maximum Instantaneous Forward Voltage at I _F = 200 mA	V _F	1.2	Volts
Typical Thermal Resistance Junction to Ambient Air	R _{θJA}	170	°C/W
Junction Temperature Range	T _J	150	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

Note 1 : Suffix "A" indicates Zener Voltage Tolerance ± 5%

FIG. 1
TYPICAL FORWARD CURRENT
DERATING CURVE

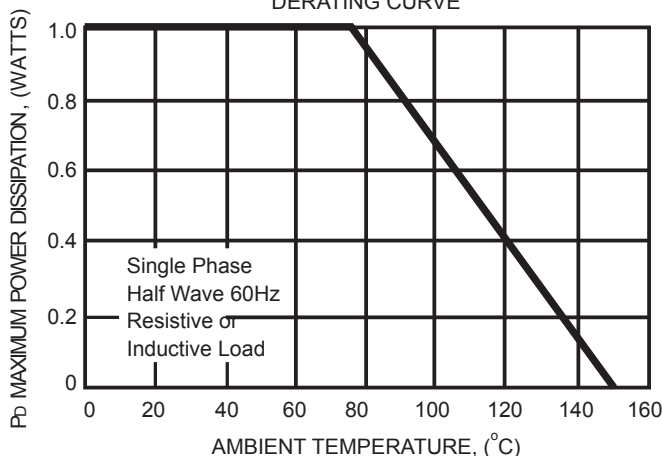
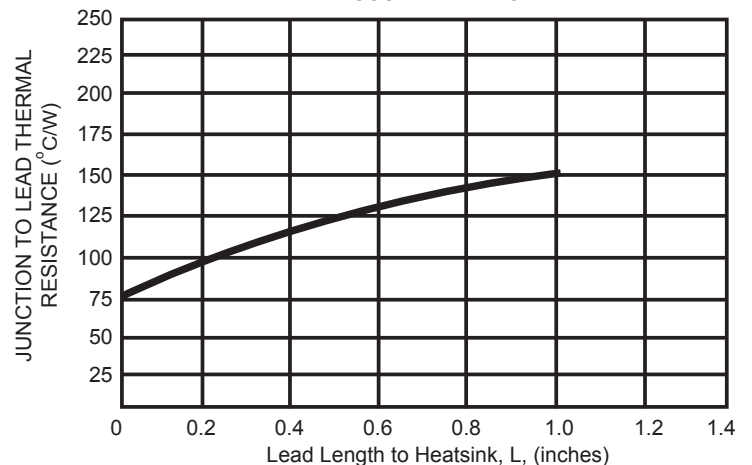


FIG. 2
TYPICAL THERMAL RESISTANCE
VERSUS LEAD LENGTH



RATING AND CHARACTERISTIC CURVES (SMAF4728A THRU SMAF4771A)

TYPE	Nominal Zener Voltage	Zener Test Current	Maximum Zener Impedance		IZK	Maximum Reverse Leakage Current	
	V _Z @I _{ZT}	I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}		I _R	@V _R
	Volts	mA	Ohms	Ohms	mA	µA	Volts
SMAF4728A	3.3	76	10	400	1.0	100	1.0
SMAF4729A	3.6	69	10	400	1.0	100	1.0
SMAF4730A	3.9	64	9.0	400	1.0	50	1.0
SMAF4731A	4.3	58	9.0	400	1.0	10	1.0
SMAF4732A	4.7	53	8.0	500	1.0	10	1.0
SMAF4733A	5.1	49	7.0	550	1.0	10	1.0
SMAF4734A	5.6	45	5.0	600	1.0	10	2.0
SMAF4735A	6.2	41	2.0	700	1.0	10	3.0
SMAF4736A	6.8	37	3.5	700	1.0	10	4.0
SMAF4737A	7.5	34	4.0	700	0.5	10	5.0
SMAF4738A	8.2	31	4.5	700	0.5	10	6.0
SMAF4739A	9.1	28	5.0	700	0.5	10	7.0
SMAF4740A	10.0	25	7.0	700	0.25	10	7.6
SMAF4741A	11.0	23	8.0	700	0.25	5.0	8.4
SMAF4742A	12.0	21	9.0	700	0.25	5.0	9.1
SMAF4743A	13.0	19	10	700	0.25	5.0	9.9
SMAF4744A	15.0	17	14	700	0.25	5.0	11.4
SMAF4745A	16.0	15.5	16	700	0.25	5.0	12.2
SMAF4746A	18.0	14	20	750	0.25	5.0	13.7
SMAF4747A	20.0	12.5	22	750	0.25	5.0	15.2
SMAF4748A	22.0	11.5	23	750	0.25	5.0	16.7
SMAF4749A	24.0	10.5	25	750	0.25	5.0	18.2
SMAF4750A	27.0	9.5	35	750	0.25	5.0	20.6
SMAF4751A	30.0	8.5	40	1000	0.25	5.0	22.8
SMAF4752A	33.0	7.5	45	1000	0.25	5.0	25.1
SMAF4753A	36.0	7.0	50	1000	0.25	5.0	27.4
SMAF4754A	39.0	6.5	60	1000	0.25	5.0	29.7
SMAF4755A	43.0	6.0	70	1500	0.25	5.0	32.7
SMAF4756A	47.0	5.5	80	1500	0.25	5.0	35.8
SMAF4757A	51.0	5.0	95	1500	0.25	5.0	38.8
SMAF4758A	56.0	4.5	110	2000	0.25	5.0	42.6

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	V _Z @I _{ZT}	I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}		I _R	@V _R
	Volts	mA	Ohms	Ohms	mA	μA	Volts
SMAF4759A	62.0	4.0	125	2000	0.25	5.0	47.1
SMAF4760A	68.0	3.7	150	2000	0.25	5.0	51.7
SMAF4761A	75.0	3.3	175	2000	0.25	5.0	56.0
SMAF4762A	82.0	3.0	200	3000	0.25	5.0	62.2
SMAF4763A	91.0	2.8	250	3000	0.25	5.0	69.2
SMAF4764A	100	2.5	350	3000	0.25	5.0	76.0
SMAF4765A	110	2.3	450	4000	0.25	5.0	83.6
SMAF4766A	120	2.0	550	4500	0.25	5.0	91.2
SMAF4767A	130	1.9	700	5000	0.25	5.0	98.8
SMAF4768A	150	1.7	1000	6000	0.25	5.0	114.0
SMAF4769A	160	1.6	1100	6500	0.25	5.0	121.6
SMAF4770A	180	1.4	1200	7000	0.25	5.0	136.8
SMAF4771A	200	1.2	1900	9990	0.25	5.0	152.0

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