



FEATURE

- ◆ For surface mounted applications in order to optimize board space
- ◆ Low profile package
- ◆ Built-in strain relief
- ◆ Glass passivated junction
- ◆ Low inductance
- ◆ Typical I_R less than $5.0 \mu A$ above 11V
- ◆ High temperature soldering guaranteed:
260°C / 10 seconds at terminals
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0

MECHANICAL DATA

Case: Molded plastic over passivated junction

Terminals: Plated leads, solderable per MIL-STD 750, method 2025

Polarity: Color band denotes cathode end

Standard packaging: 12mm tape (EIA-481)

Weight: 0.002 ounce, 0.07 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

MDD Catalog Number	SYMBOLS	VALUE	UNITS
Peak Power Dissipation at $T_A=50^\circ C$, Derate above $50^\circ C$ (Note 1)	P_D	1.0 6.67	Watts mW/ $^\circ C$
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) (Note 2)	I_{FSM}	10.0	Amps
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150	$^\circ C$

- Notes: 1. Mounted on $5.0mm^2$ (0.013mm thick) land areas.
2. Measured on 8.3ms Single Half Sine-wave or Equivalent Square Wave,
Duty Cycle=4 Pulses Per Minute Maximum.

ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted) VF=1.2V max, IF=200mA for all types.

Part Number	V _Z @ I _{ZT}			Maximum Zener Impedance				Maximum Leakage Current		Package
				Z _{ZT} @ I _{ZT}		Z _{ZK} @ I _{ZK}		I _R @ V _R		
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	uA	V	
1.0 Watt ZENER Diodes -- continued										
1SMA4728	3.3	3.1	3.5	10.0	76.0	400	1.00	100	1.0	SMA
1SMA4729	3.6	3.4	3.8	10.0	69.0	400	1.00	100	1.0	SMA
1SMA4730	3.9	3.7	4.1	9.0	64.0	400	1.00	50	1.0	SMA
1SMA4731	4.3	4.1	4.5	9.0	58.0	400	1.00	10	1.0	SMA
1SMA4732	4.7	4.5	4.9	8.0	53.0	500	1.00	10	1.0	SMA
1SMA4733	5.1	4.8	5.4	7.0	49.0	550	1.00	10	1.0	SMA
1SMA4734	5.6	5.3	5.9	5.0	45.0	600	1.00	10	2.0	SMA
1SMA4735	6.2	5.9	6.5	2.0	41.0	700	1.00	10	3.0	SMA
1SMA4736	6.8	6.5	7.1	3.5	37.0	700	1.00	10	4.0	SMA
1SMA4737	7.5	7.1	7.9	4.0	34.0	700	0.50	10	5.0	SMA
1SMA4738	8.2	7.8	8.6	4.5	31.0	700	0.50	10	6.0	SMA
1SAM4739	9.1	8.6	9.6	5.0	28.0	700	0.50	10	7.0	SMA
1SMA4740	10.0	9.5	10.5	7.0	25.0	700	0.25	10	7.6	SMA
1SMA4741	11.0	10.5	11.6	8.0	23.0	700	0.25	5.0	8.4	SMA
1SMA4742	12.0	11.4	12.6	9.0	21.0	700	0.25	5.0	9.1	SMA
1SMA4743	13.0	12.4	13.7	10.0	19.0	700	0.25	5.0	9.9	SMA
1SMA4744	15.0	14.3	15.8	14.0	17.0	700	0.25	5.0	11.4	SMA
1SMA4745	16.0	15.2	16.8	16.0	15.5	700	0.25	5.0	12.2	SMA
1SMA4746	18.0	17.1	18.9	20.0	14.0	750	0.25	5.0	13.7	SMA
1SMA4747	20.0	19.0	21.0	22.0	12.5	750	0.25	5.0	15.2	SMA
1SMA4748	22.0	20.9	23.1	23.0	11.5	750	0.25	5.0	16.7	SMA
1SMA4749	24.0	22.8	25.2	25.0	10.5	750	0.25	5.0	18.2	SMA
1SMA4750	27.0	25.7	28.4	35.0	9.5	750	0.25	5.0	20.6	SMA
1SMA4751	30.0	28.5	31.5	40.0	8.5	1000	0.25	5.0	22.8	SMA
1SMA4752	33.0	31.4	34.7	45.0	7.5	1000	0.25	5.0	25.1	SMA
1SMA4753	36.0	34.2	37.8	50.0	7.0	1000	0.25	5.0	27.4	SMA
1SMA4754	39.0	37.1	41	60.0	6.5	1000	0.25	5.0	29.7	SMA
1SMA4755	43.0	40.9	45.2	70.0	6.0	1500	0.25	5.0	32.7	SMA
1SMA4756	47.0	44.7	49.4	80.0	5.5	1500	0.25	5.0	35.8	SMA
1SMA4757	51.0	48.5	53.6	95.0	5.0	1500	0.25	5.0	38.8	SMA
1SMA4758	56.0	53.2	58.8	110	4.5	2000	0.25	5.0	42.6	SMA
1SMA4759	62.0	58.9	65.1	125	4.0	2000	0.25	5.0	47.1	SMA
1SMA4760	68.0	64.6	71.4	150	3.7	2000	0.25	5.0	51.7	SMA
1SMA4761	75.0	71.3	78.8	175	3.3	2000	0.25	5.0	56.0	SMA
1SMA4762	82.0	77.9	86.1	200	3.0	3000	0.25	5.0	62.2	SMA
1SMA4763	91.0	86.5	95.6	250	2.8	3000	0.25	5.0	69.2	SMA
1SMA4764	100	95.0	105	350	2.5	3000	0.25	5.0	76.0	SMA
1SMA110A	110	104.5	115.5	450	2.3	4000	0.25	5.0	83.6	SMA
1SMA120A	120	114	126	550	2.0	4500	0.25	5.0	91.2	SMA
1SMA130A	130	123.5	136.5	700	1.9	5000	0.25	5.0	98.8	SMA
1SMA150A	150	142.5	157.5	1000	1.7	6000	0.25	5.0	114.0	SMA
1SMA160A	160	152	168	1100	1.6	6500	0.25	5.0	121.6	SMA
1SMA180A	180	171	189	1200	1.4	7000	0.25	5.0	136.8	SMA
1SMA200A	200	190	210	1500	1.2	8000	0.25	5.0	152.0	SMA

Notes :

- (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

RATINGS AND CHARACTERISTIC CURVES(1SMA4728 THRU 1SMA200A)

FIG.1- POWER TEMPERATURE DERATING CURVE

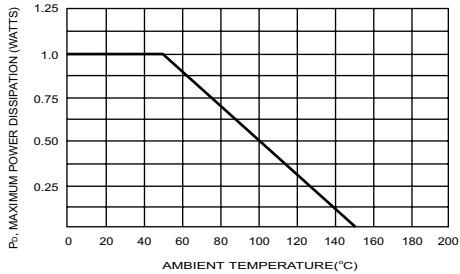


FIG.2- TYPICAL FORWARD CHARACTERISTICS

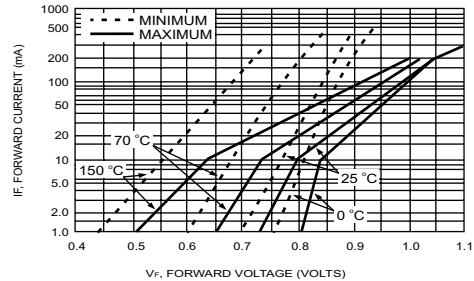


FIG.3- EFFECT OF ZENER CURRENT ON ZENER IMPEDANCE

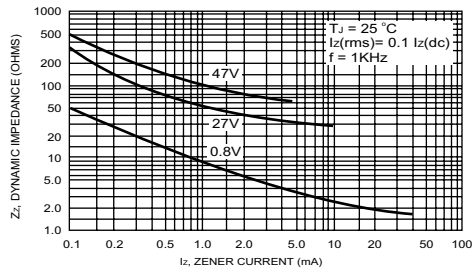


FIG.5- TYPICAL LEAKAGE CURRENT

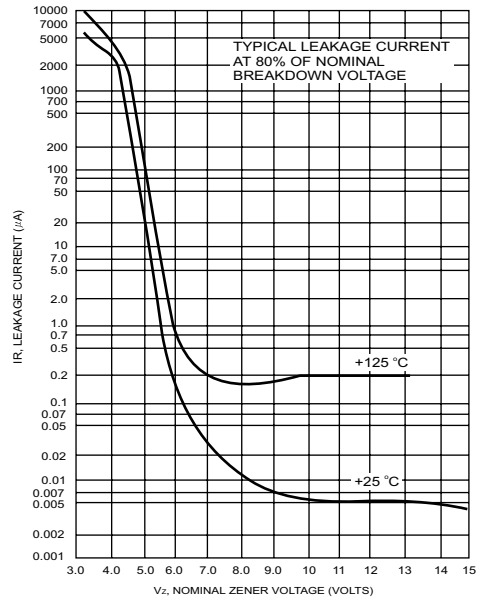


FIG.4- EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

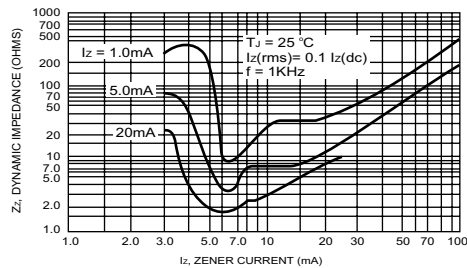


FIG.6- TYPICAL CAPACITANCE versus Vz

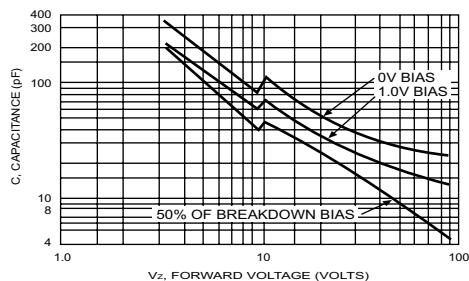
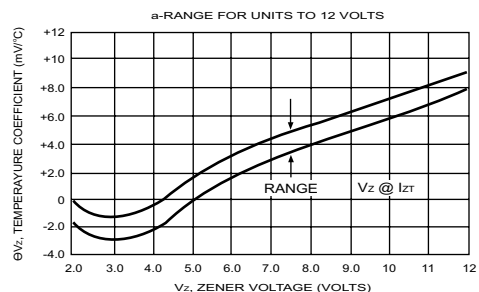


FIG.7- TEMPERATURE COEFFICIENTS



RATINGS AND CHARACTERISTIC CURVES(1SMA4728 THRU 1SMA200A)

FIG.7- TEMPERATURE COEFFICIENTS

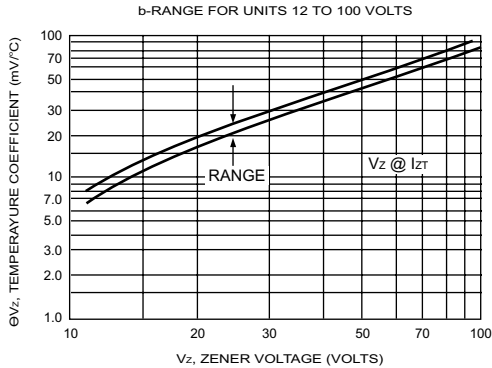


FIG.8- EFFECT OF ZENER CURRENT

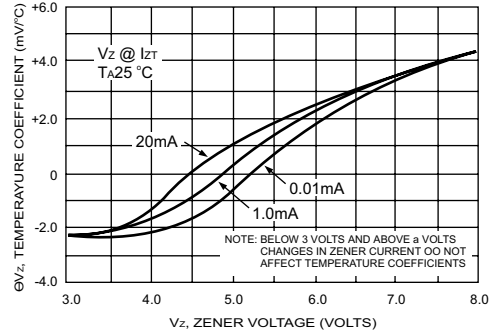
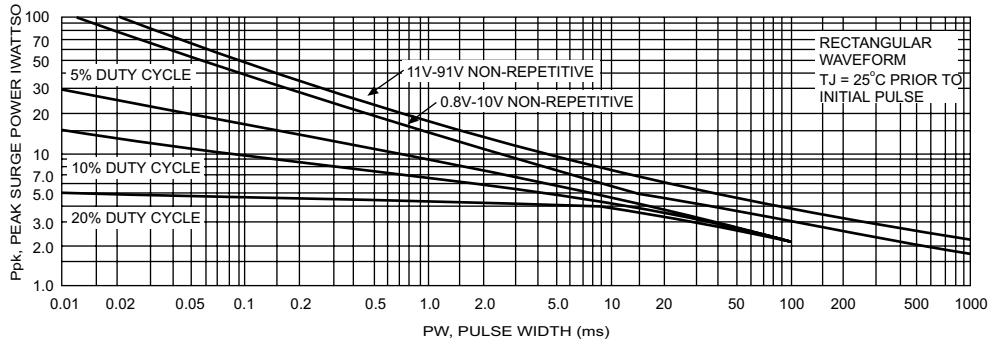


FIG.9- MAXIMUM SURGE POWER



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMA	5000/REEL	80000	36X30.6X31	12.00	11.00

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