

Surface Mount Zener Diodes 1W

SMA4728A Thru SMA4764A

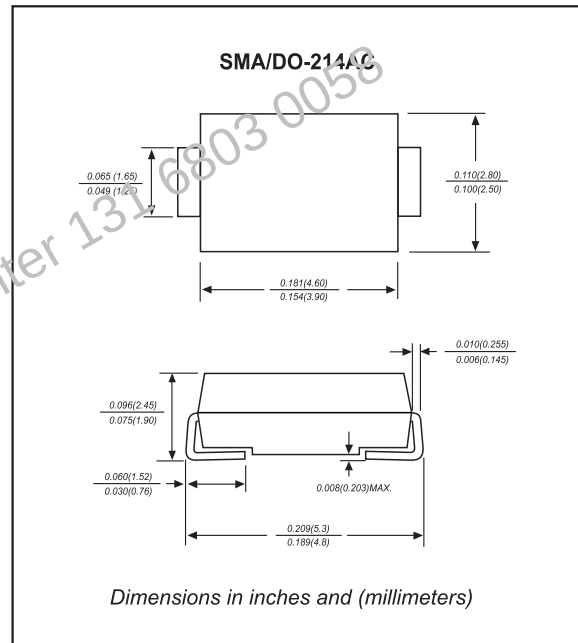
Formosa MS

●FEATURES

- . For surface mounted applications
- . 1.0 W power dissipation
- . Low reverse current
- . Ideally suited for automated assembly processes
- . Epitaxial construction

●MECHANICAL DATA

- . Case: Molded plastic
- . Epoxy: UL 94V-0 rate flame retardant
- . Metallurgically bonded construction
- . Polarity: Color band denotes cathode end
- . Mounting position: Any
- . Weight: 0.064 grams



●MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.

Electrical Characteristics	Symbol	Value	Unit
Power Dissipation (Note 1)	P _D	1.0	W
Half sine-wave superimposed on rated load JEDEC method (Note 2)	I _{FSM}	10	A
Operating junction and Storage Temperature	T _J , T _{STG}	-55 to +155	°C

Note: (1) Mounted on 5.0mm² (.013mm thick) land areas.

(2) Measurd on 8.3ms, single half-sine wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

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Electrical Characteristic (Ta=25°C)

Rating at 25 °C ambient temperature unless otherwise specified

Type	Device Marking	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current	Maximum Surge Current
		V _Z @ I _{ZT}	I _{ZT}	Z _{KT} @ I _{ZT}	Z _{KK} @ I _{ZK}	I _{ZK}	I _R @ V _R		I _{ZM}	I _{RM} ⁽²⁾
		(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)	(mApk)
SMA4728A	728A	3.3	76.0	10	400	1.0	100	1.0	276	1380
SMA4729A	729A	3.6	69.0	10	400	1.0	100	1.0	252	1260
SMA4730A	730A	3.9	64.0	9.0	400	1.0	50	1.0	234	1190
SMA4731A	731A	4.3	58.0	9.0	400	1.0	10	1.0	217	1070
SMA4732A	732A	4.7	53.0	8.0	500	1.0	10	1.0	193	970
SMA4733A	733A	5.1	49.0	7.0	550	1.0	10	1.0	178	890
SMA4734A	734A	5.6	45.0	5.0	600	1.0	10	2.0	162	810
SMA4735A	735A	6.2	41.0	2.0	700	1.0	10	3.0	146	730
SMA4736A	736A	6.8	37.0	3.5	700	1.0	10	4.0	133	660
SMA4737A	737A	7.5	34.0	4.0	700	0.5	10	5.0	121	605
SMA4738A	738A	8.2	31.0	4.5	700	0.5	10	6.0	110	550
SMA4739A	739A	9.1	28.0	5.0	700	0.5	10	7.0	100	500
SMA4740A	740A	10	25.0	7.0	700	0.25	10	7.6	91	454
SMA4741A	741A	11	23.0	8.0	700	0.25	5.0	8.4	83	414
SMA4742A	742A	12	21.0	9.0	700	0.25	5.0	9.1	76	380
SMA4743A	743A	13	19.0	10	700	0.25	5.0	9.9	69	344
SMA4744A	744A	15	17.0	14	700	0.25	5.0	11.4	61	305
SMA4745A	745A	16	15.5	16	700	0.25	5.0	12.2	57	285
SMA4746A	746A	18	14.0	20	750	0.25	5.0	13.7	50	250
SMA4747A	747A	20	12.5	22	750	0.25	5.0	15.2	45	225
SMA4748A	748A	22	11.5	23	750	0.25	5.0	16.7	41	205
SMA4749A	749A	24	10.5	25	750	0.25	5.0	18.2	38	190
SMA4750A	750A	27	9.5	35	750	0.25	5.0	20.6	34	170
SMA4751A	751A	30	8.5	40	1000	0.25	5.0	22.8	30	150
SMA4752A	752A	33	7.5	45	1000	0.25	5.0	25.1	27	135
SMA4753A	753A	36	7.0	50	1000	0.25	5.0	27.4	25	125
SMA4754A	754A	39	6.5	60	1000	0.25	5.0	29.7	23	115
SMA4755A	755A	43	6.0	70	1500	0.25	5.0	32.7	22	110
SMA4756A	756A	47	5.5	80	1500	0.25	5.0	35.8	19	95
SMA4757A	757A	51	5.0	95	1500	0.25	5.0	38.8	18	90
SMA4758A	758A	56	4.5	110	2000	0.25	5.0	42.6	16	80
SMA4759A	759A	62	4.0	125	2000	0.25	5.0	47.1	14	70
SMA4760A	760A	68	3.7	150	2000	0.25	5.0	51.7	13	65
SMA4761A	761A	75	3.3	175	2000	0.25	5.0	56.0	12	60
SMA4762A	762A	82	3.0	200	3000	0.25	5.0	62.2	11	55
SMA4763A	763A	91	2.8	250	3000	0.25	5.0	69.2	10	50
SMA4764A	764A	100	2.5	350	3000	0.25	5.0	76.0	9.0	45

Note:

The JEDEC type number shown with an A suffix have a 5% tolerance on nominal zener voltage .No suffix signifies a 10% tolerance, C signifies 2%, and D suffix signifies 1% tolerance.



FIG 1. POWER TEMPERATURE DERATING CURVE

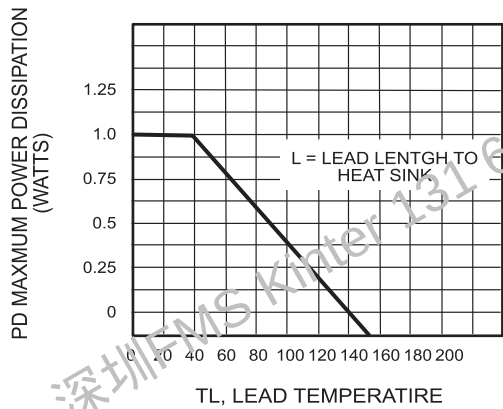


FIG 2. TEMPERATURE COEFFICIENTS
(-55°C TO +150°C TEMPERATURE RANGE; 90% OF THE UNITS ARE IN RANGES INDICATED.)

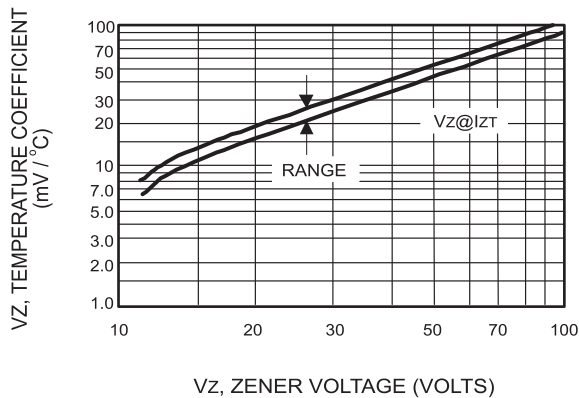
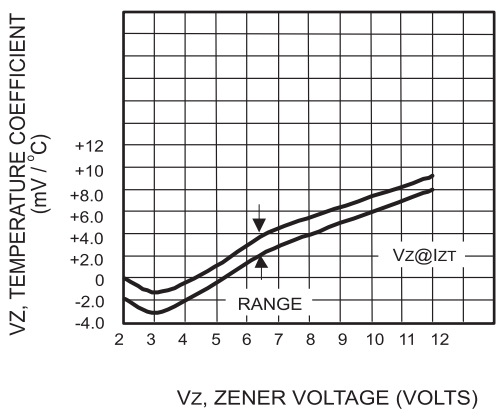


FIG 3. TYPICAL THERMAL RESISTANCE
VERSUS LEAD LENGTH

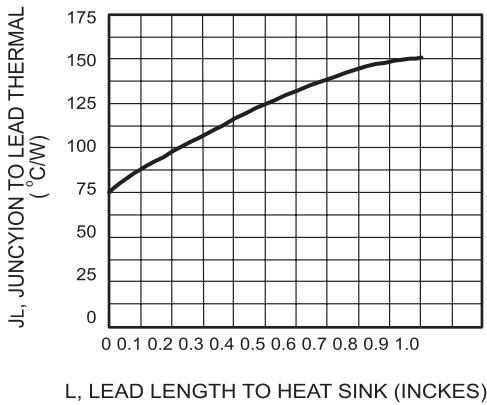


FIG 4. EFFECT OF ZENER CURRENT

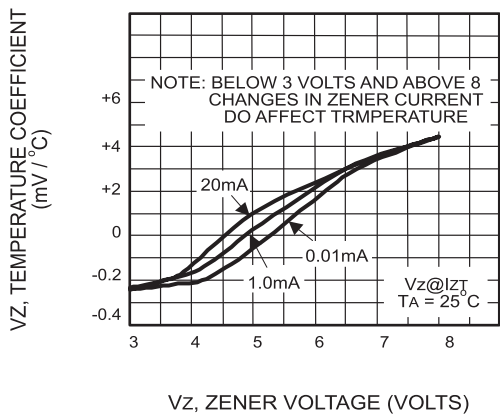
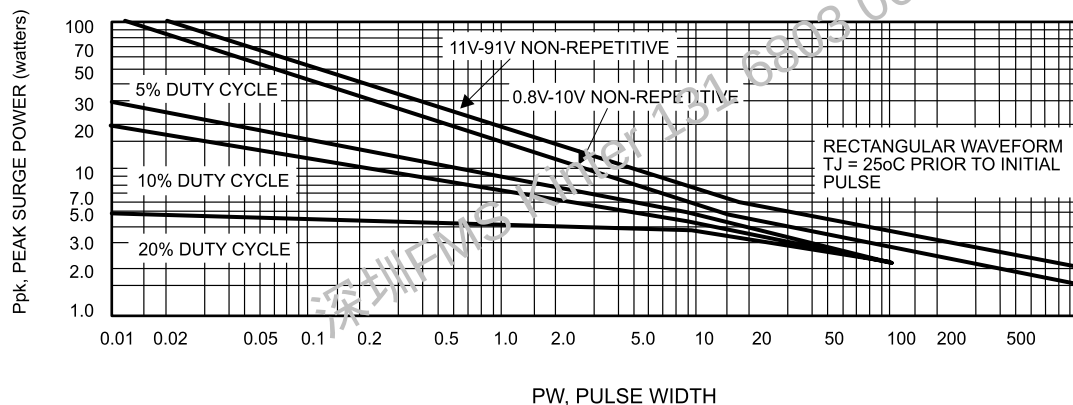


FIG 5. MAXIMUM SURGE POWER



This graph represents 90 percentile data point
For worse-case design characteristics, multiply surge power by 2/3

FIG 6. EFFECT OF ZENER CURRENT ON ZENER IMPEDANCE

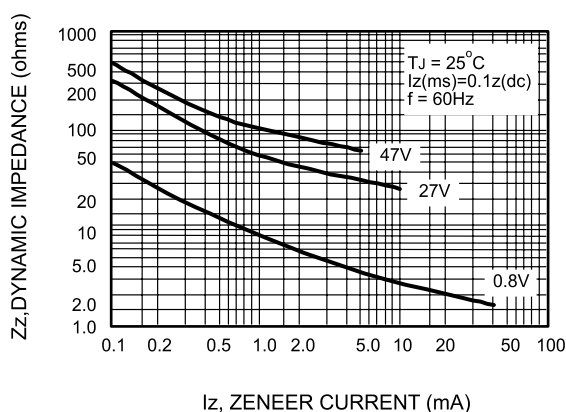


FIG 7. EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

