SMBJ4728A-SMBJ4764A

Surface Mount Silicon Zener Diodes

V_Z : 3.3 - 100 Volts
P_D : 2.0 Watt

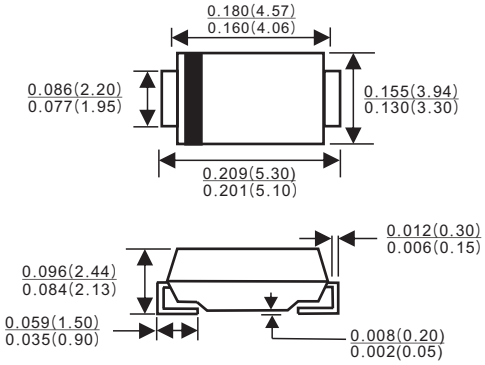
Features

- Complete Voltage Range 3.3 to 100 Volts
- High peak reverse power dissipation
- High reliability
- Low leakage current
- Pb / RoHS Free

Mechanical Data

- Case : SMB Molded plastic
- Epoxy : UL94V-O rate flame retardant
- Polarity : Color band denotes cathode end
- Mounting position : Any
- Weight : 0.090 gram (Approximately)

SMB/DO-214AA



Dimensions in inches and (millimeters)

MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified

Rating	Symbol	Value	Unit
DC Power Dissipation at T_L = 75 °C (Note1)	P_D	2.0	W
Maximum Forward Voltage at I_F = 200 mA	V_F	1.2	V
Junction Temperature Range	T_J	- 55 to + 150	°C
Storage Temperature Range	T_{STG}	- 55 to + 150	°C

Note :

(1) P.C.B. Mounted on 0.31x0.31x0.08" (8x8x2mm) copper areas pad

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ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

Type	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current	Maximum Surge Current
	V_Z [1] @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R @ V_R		I_{ZM}	I_{RM} [2]
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)	(mApk)
SMBJ4728A	3.3	76.0	10	400	1.0	100	1.0	276	1380
SMBJ4729A	3.6	69.0	10	400	1.0	100	1.0	252	1260
SMBJ4730A	3.9	64.0	9.0	400	1.0	50	1.0	234	1190
SMBJ4731A	4.3	58.0	9.0	400	1.0	10	1.0	217	1070
SMBJ4732A	4.7	53.0	8.0	500	1.0	10	1.0	193	970
SMBJ4733A	5.1	49.0	7.0	550	1.0	10	1.0	178	890
SMBJ4734A	5.6	45.0	5.0	600	1.0	10	2.0	162	810
SMBJ4735A	6.2	41.0	2.0	700	1.0	10	3.0	146	730
SMBJ4736A	6.8	37.0	3.5	700	1.0	10	4.0	133	660
SMBJ4737A	7.5	34.0	4.0	700	0.5	10	5.0	121	605
SMBJ4738A	8.2	31.0	4.5	700	0.5	10	6.0	110	550
SMBJ4739A	9.1	28.0	5.0	700	0.5	10	7.0	100	500
SMBJ4740A	10	25.0	7.0	700	0.25	10	7.6	91	454
SMBJ4741A	11	23.0	8.0	700	0.25	5.0	8.4	83	414
SMBJ4742A	12	21.0	9.0	700	0.25	5.0	9.1	76	380
SMBJ4743A	13	19.0	10	700	0.25	5.0	9.9	69	344
SMBJ4744A	15	17.0	14	700	0.25	5.0	11.4	61	305
SMBJ4745A	16	15.5	16	700	0.25	5.0	12.2	57	285
SMBJ4746A	18	14.0	20	750	0.25	5.0	13.7	50	250
SMBJ4747A	20	12.5	22	750	0.25	5.0	15.2	45	225
SMBJ4748A	22	11.5	23	750	0.25	5.0	16.7	41	205
SMBJ4749A	24	10.5	25	750	0.25	5.0	18.2	38	190
SMBJ4750A	27	9.5	35	750	0.25	5.0	20.6	34	170
SMBJ4751A	30	8.5	40	1000	0.25	5.0	22.8	30	150
SMBJ4752A	33	7.5	45	1000	0.25	5.0	25.1	27	135
SMBJ4753A	36	7.0	50	1000	0.25	5.0	27.4	25	125
SMBJ4754A	39	6.5	60	1000	0.25	5.0	29.7	23	115
SMBJ4755A	43	6.0	70	1500	0.25	5.0	32.7	22	110
SMBJ4756A	47	5.5	80	1500	0.25	5.0	35.8	19	95
SMBJ4757A	51	5.0	95	1500	0.25	5.0	38.8	18	90
SMBJ4758A	56	4.5	110	2000	0.25	5.0	42.6	16	80
SMBJ4759A	62	4.0	125	2000	0.25	5.0	47.1	14	70
SMBJ4760A	68	3.7	150	2000	0.25	5.0	51.7	13	65
SMBJ4761A	75	3.3	175	2000	0.25	5.0	56.0	12	60
SMBJ4762A	82	3.0	200	3000	0.25	5.0	62.2	11	55
SMBJ4763A	91	2.8	250	3000	0.25	5.0	69.2	10	50
SMBJ4764A	100	2.5	350	3000	0.25	5.0	76.0	9.0	45

Notes :

(1) Standard voltage toleranceis±10%, Suffix A ± 5%

(2) Surge current is a non-repetitive,8.3ms pulse width square wave or equivalent sine-wave superimposed on IZT per JEDEC Method

(3) " SMBJ " will be omitted in marking on the diode.

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FIG.1- POWER TEMPERATURE DERATING CURVE

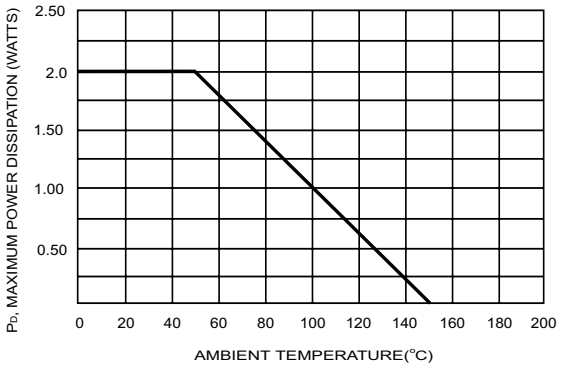


FIG.2- TYPICAL FORWARD CHARACTERISTICS

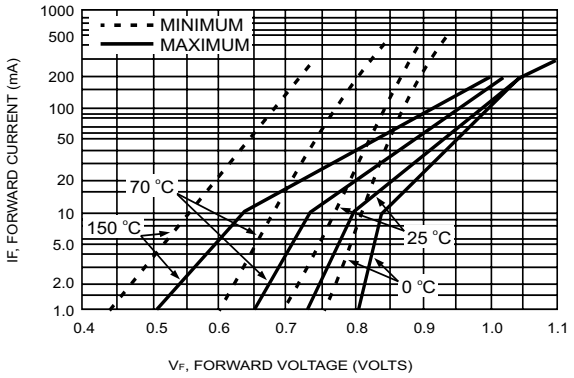


FIG.3- EFFECT OF ZENER CURRENT ON ZENER IMPEDANCE

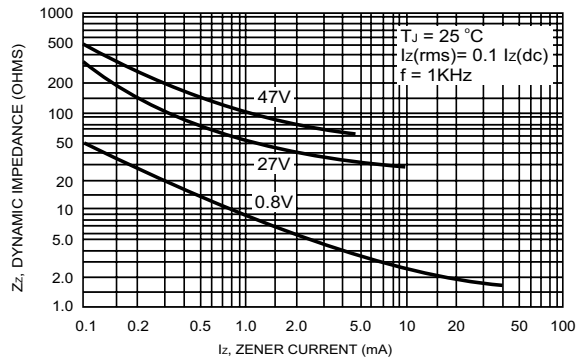


FIG.4- EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

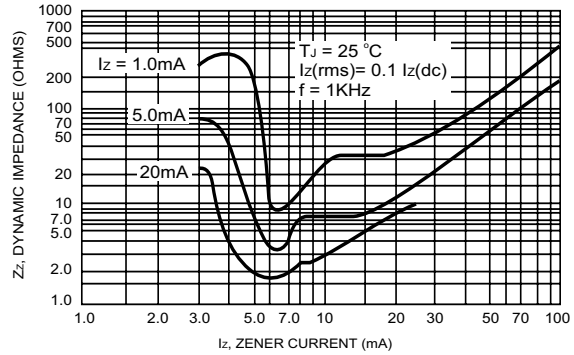


FIG.5- TYPICAL LEAKAGE CURRENT

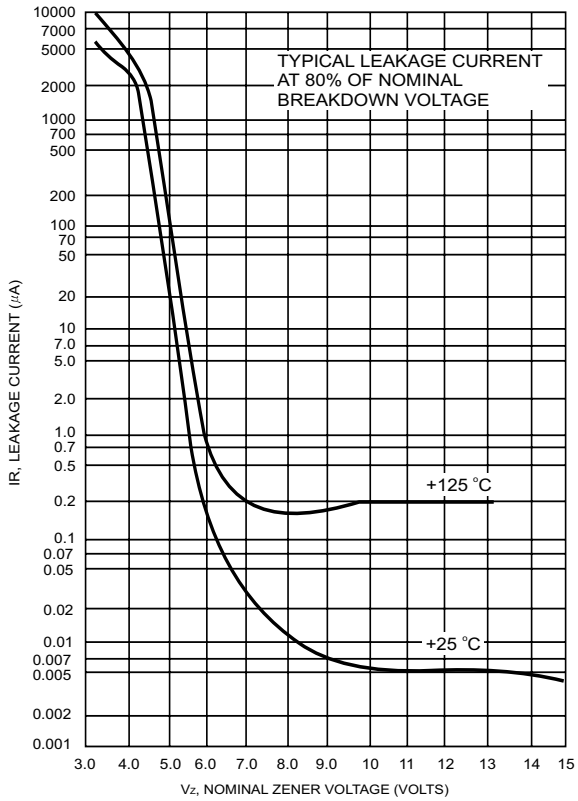


FIG.6- TYPICAL CAPACITANCE versus Vz

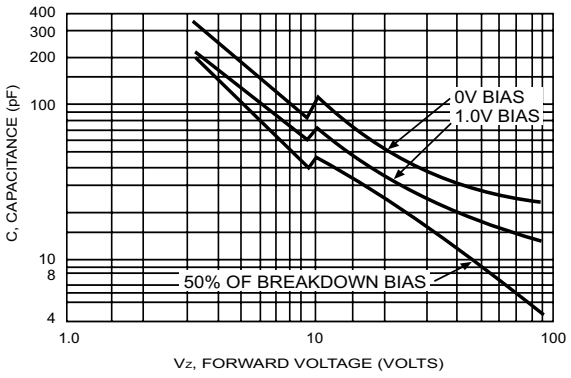


FIG.7- TEMPERATURE COEFFICIENTS

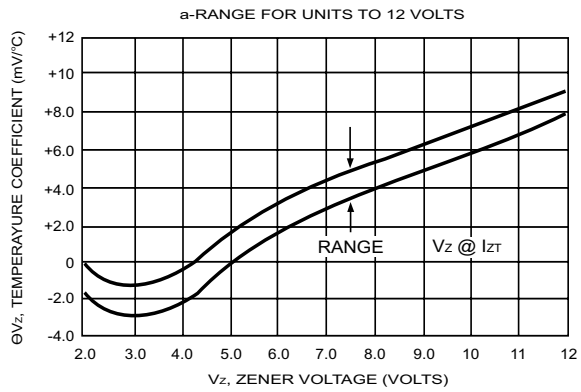


FIG.7- TEMPERATURE COEFFICIENTS

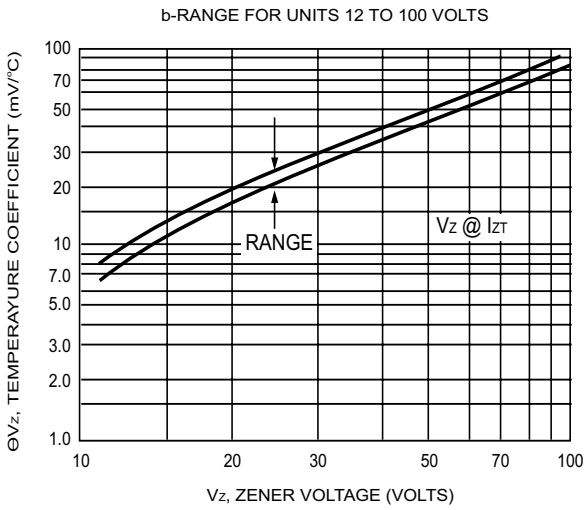


FIG.8- EFFECT OF ZENER CURRENT

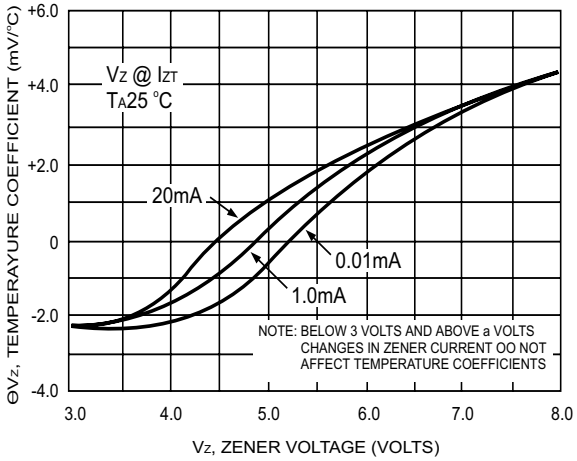
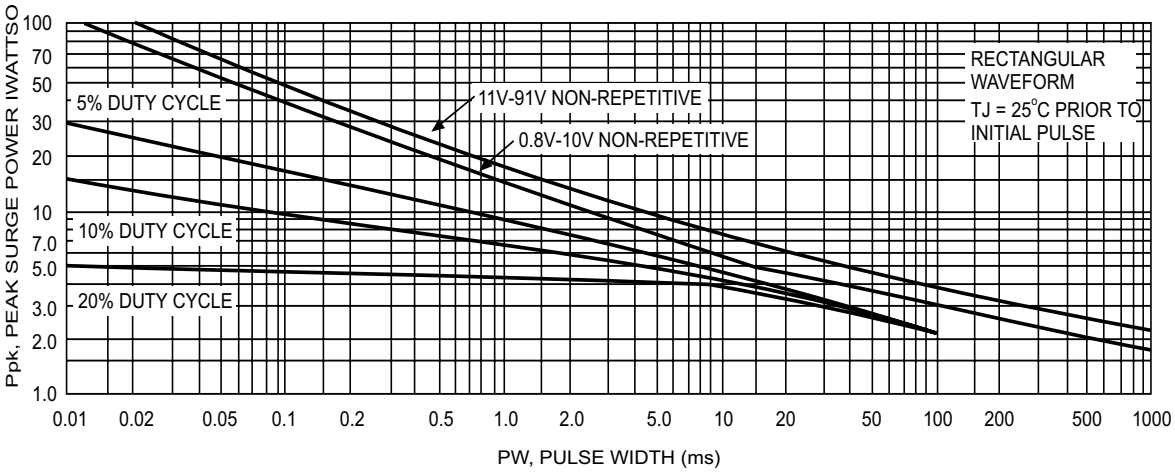


FIG.9- MAXIMUM SURGE POWER



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMB	3000/REEL	48000	36X35.8X36.5	12.00	11.00