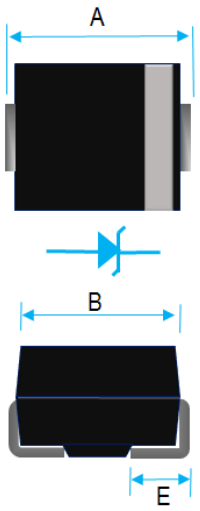
1.0W SURFACE MOUNT ZENER DIODES, 3.3V – 100V



Dim.	Value Inch[mm] Min.	Max.
A	0.188[4.80]	0.220[5.60]
B	0.157[3.99]	0.181[4.60]
C	0.090[2.30]	0.114[2.90]
D	0.078[1.98]	0.100[2.60]
E	0.030[0.76]	0.060[1.52]
F	0.040[1.25]	0.065[1.65]

PRODUCT FEATURES

1. FLAMMABILITY CLASSIFICATION 94V-0
2. GLASS PASSIVATED CHIP CONSTRUCTION
3. WIDE ZENER VOLTAGE RANGE FROM 3.3V TO 100V
4. LOW INDUCTANCE AND ZENER IMPEDANCE
5. POLARITY: INDICATED BY CATHODE BAND
6. MOLDED PLASTIC CASE DO-214AC (SMA)
7. DIMENSIONS IN INCHES AND (MILLIMETERS)
8. LEADS: SOLDERABILITY PER MIL-STD-750 METHOD 2026
9. WEIGHT: 0.05 GRAMS
10. RoHS COMPLIANT. ADD SUFFIX “-H” FOR HALOGEN FREE PART. i.e. ZS4728A-H.

ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS (T_A =25°C UNLESS OTHERWISE NOTED)

PARAMETER	CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNIT
FORWARD VOLTAGE	I_F = 200mA	V_F			1.2	V
POWER DISSIPATION	T_L = 75°C	P_D			1.0	W
THERMAL RESISTANCE	JUNCTION TO CASE(NOTE 1) JUNCTION TO AMBIENT(NOTE 1)	$R_{\theta JC}$ $R_{\theta JA}$		30 50		°C/W
OPERATING TEMPERATURE		T_J	-55		+150	°C
STORAGE TEMPERATURE		T_{STG}	-65		+175	°C

Note：1. Mounted on 0.2"x0.2"(5x5mm) FR-4 PCB

ZS4728A THRU ZS4764A SPECIFICATION

Rev. A

Part No.	Marking code	Zener			Test Current	Zener Impedance			Leakage Current	
		V_Z @ I_{ZT} (Volts)			I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R	V_R
		Min.	Nom.	Max.	mA	(Ω)Max	(Ω)Max	mA	(uA)Max	Volts
ZS4728A	Z3V3	3.14	3.3	3.47	76	10	400	1.00	100	1.0
ZS4729A	Z3V6	3.42	3.6	3.78	69	10	400	1.00	100	1.0
ZS4730A	Z3V9	3.71	3.9	4.10	64	9	400	1.00	50	1.0
ZS4731A	Z4V3	4.09	4.3	4.52	58	9	400	1.00	10	1.0
ZS4732A	Z4V7	4.47	4.7	4.94	53	8	500	1.00	10	1.0
ZS4733A	Z5V1	4.85	5.1	5.36	49	7	550	1.00	10	1.0
ZS4734A	Z5V6	5.32	5.6	5.88	45	5	600	1.00	10	2.0
ZS4735A	Z6V2	5.89	6.2	6.51	41	2	700	1.00	10	3.0
ZS4736A	Z6V8	6.46	6.8	7.14	37	3.5	700	1.00	10	4.0
ZS4737A	Z7V5	7.13	7.5	7.88	34	4.0	700	0.50	10	5.0
ZS4738A	Z8V2	7.79	8.2	8.61	31	4.5	700	0.50	10	6.0
ZS4739A	Z9V1	8.65	9.1	9.56	28	5	700	0.50	10	7.0
ZS4740A	Z10	9.50	10	10.50	25	7	700	0.25	10	7.6
ZS4741A	Z11	10.45	11	11.55	23	8	700	0.25	5	8.4
ZS4742A	Z12	11.40	12	12.60	21	9	700	0.25	5	9.1
ZS4743A	Z13	12.35	13	13.65	19	10	700	0.25	5	9.9
ZS4744A	Z15	14.25	15	15.75	17	14	700	0.25	5	11.4
ZS4745A	Z16	15.20	16	16.80	15.5	16	700	0.25	5	12.2
ZS4746A	Z18	17.10	18	18.90	14	20	750	0.25	5	13.7
ZS4747A	Z20	19.00	20	21.00	12.5	22	750	0.25	5	15.2
ZS4748A	Z22	20.90	22	23.10	11.5	23	750	0.25	5	16.7
ZS4749A	Z24	22.80	24	25.20	10.5	25	750	0.25	5	18.2
ZS4750A	Z27	25.65	27	28.35	9.5	35	750	0.25	5	20.6
ZS4751A	Z30	28.50	30	31.50	8.5	40	1000	0.25	5	22.8
ZS4752A	Z33	31.35	33	34.65	7.5	45	1000	0.25	5	25.1
ZS4753A	Z36	34.20	36	37.80	7.0	50	1000	0.25	5	27.4
ZS4754A	Z39	37.05	39	40.95	6.5	60	1000	0.25	5	29.7
ZS4755A	Z43	40.85	43	45.15	6.0	70	1500	0.25	5	32.7
ZS4756A	Z47	44.65	47	49.35	5.5	80	1500	0.25	5	35.8
ZS4757A	Z51	48.45	51	53.55	5.0	95	1500	0.25	5	38.8
ZS4758A	Z56	53.20	56	58.80	4.5	110	2000	0.25	5	42.6
ZS4759A	Z62	58.90	62	65.10	4.0	125	2000	0.25	5	47.1
ZS4760A	Z68	64.60	68	71.40	3.7	150	2000	0.25	5	51.7
ZS4761A	Z75	71.25	75	78.78	3.3	175	2000	0.25	5	56.0
ZS4762A	Z82	77.90	82	86.10	3.0	200	3000	0.25	5	62.2
ZS4763A	Z91	86.45	91	95.55	2.8	250	3000	0.25	5	69.2
ZS4764A	Z100	95.00	100	105.0	2.5	350	3000	0.25	5	76.0

Note : Suffix A denotes 5% tolerance of Zener voltage

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RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM CONTINUOUS POWER DERATING

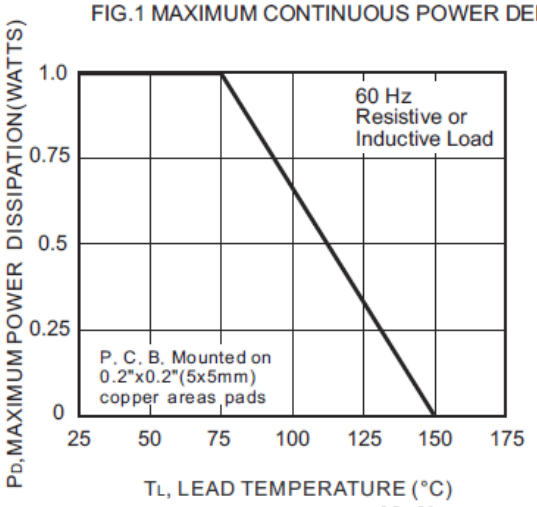


FIG.2A Range for Units to 12 Volts

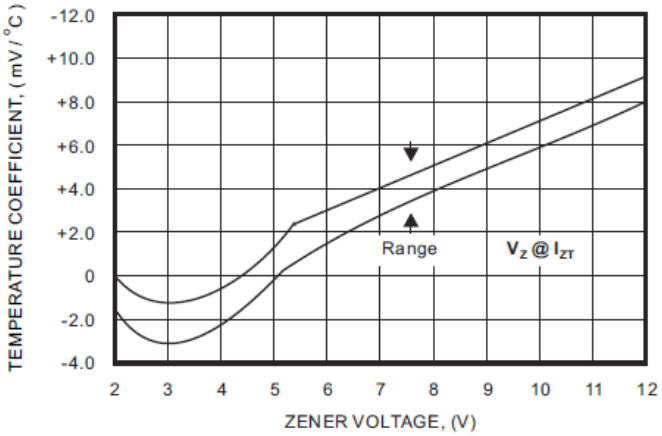


FIG.2B Range for Units to 12 to 100 Volts

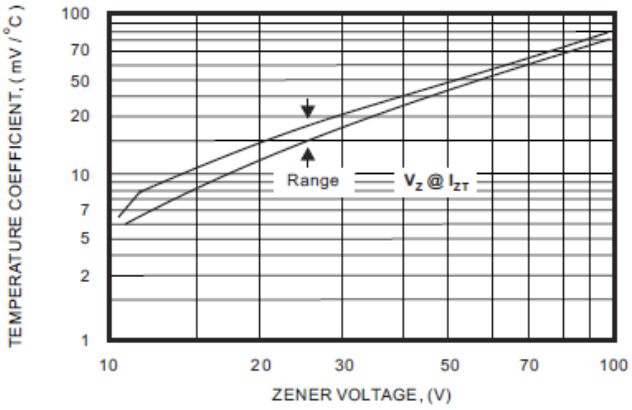
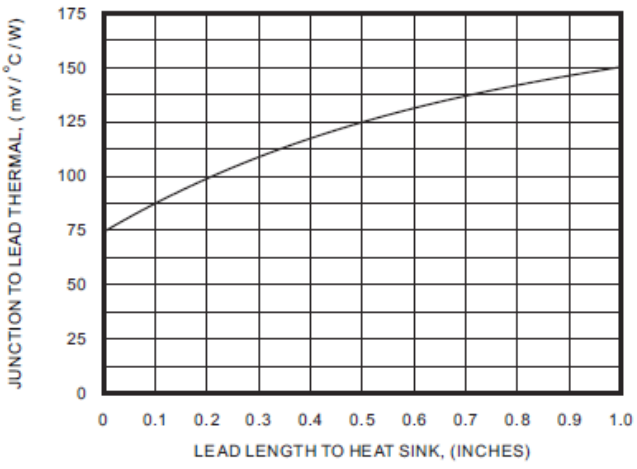


Fig. 3 Temperature Coefficients (-55°C to +150°C temperature change;90% of the units are in the ranges indicated.)



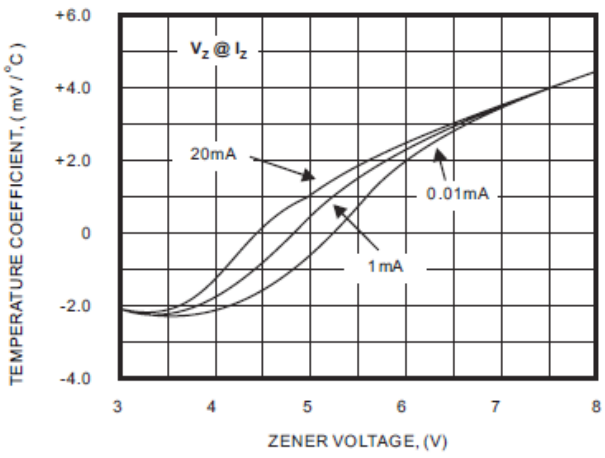


FIG.4 Typical Thermal Resistance versus Lead

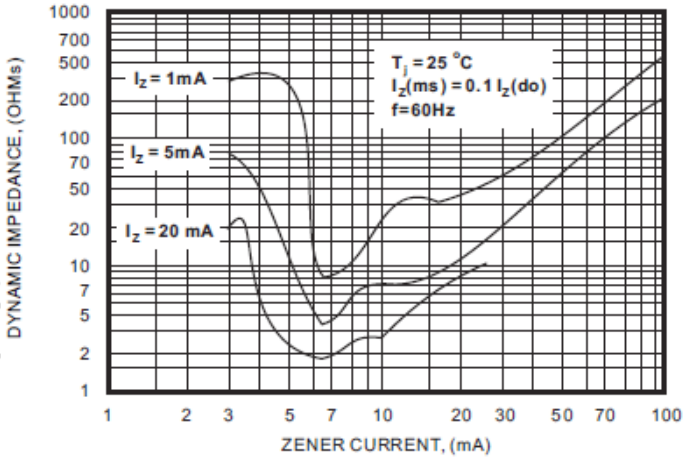


Fig 5. Effect of Zener Current

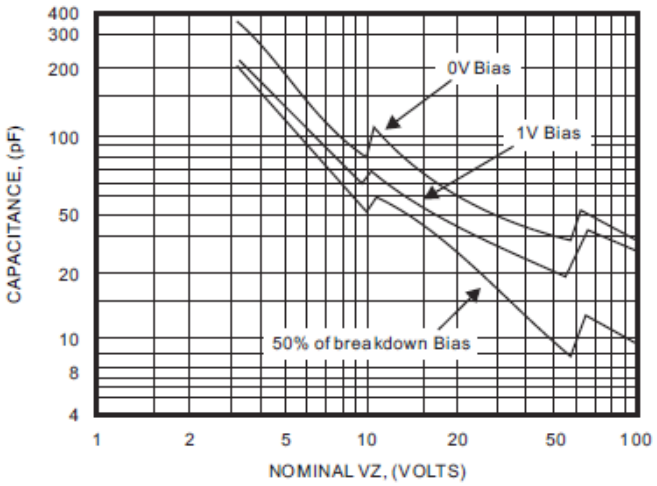
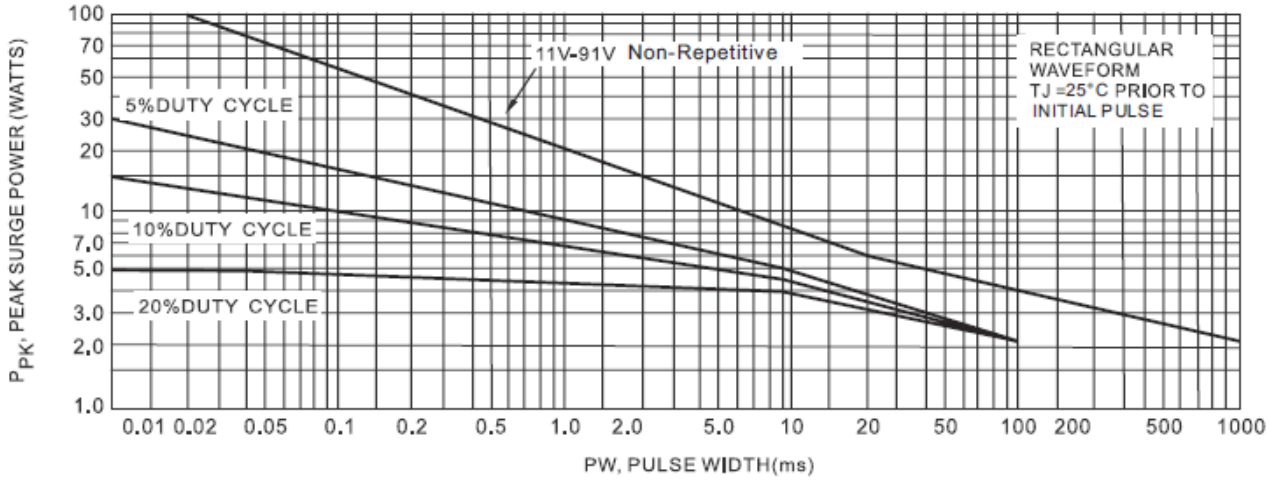



Fig 6. Maximum surge power