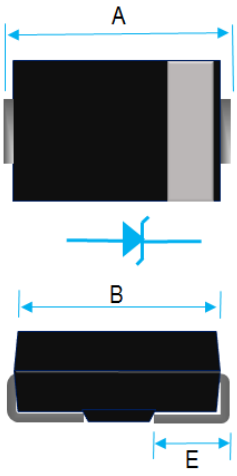
3W SURFACE MOUNT ZENER DIODES, 6.8V – 200V



Dim.	Value Inch[mm] Min.	Max.
A	0.197[5.00]	0.220[5.59]
B	0.160[4.06]	0.180[4.57]
C	0.130[3.30]	0.155[3.94]
D	0.079[2.00]	0.097[2.47]
E	0.030[0.76]	0.060[1.52]
F	0.075[1.91]	0.086[2.18]

PRODUCT FEATURES

1. FLAMMABILITY CLASSIFICATION 94V-0
2. GLASS PASSIVATED CHIP CONSTRUCTION
3. WIDE ZENER VOLTAGE RANGE FROM 6.8V TO 200V
4. LOW INDUCTANCE AND ZENER IMPEDANCE
5. POLARITY: INDICATED BY CATHODE BAND
6. MOLDED PLASTIC CASE DO-214AA (SMB)
7. DIMENSIONS IN INCHES AND (MILLIMETERS)
8. LEADS: SOLDERABILITY PER MIL-STD-750 METHOD 2026
9. WEIGHT: 0.09 GRAMS
10. RoHS COMPLIANT. ADD SUFFIX “-H” FOR HALOGEN FREE PART. i.e. ZGFM306V8B-H.

ELECTRICAL CHARACTERISTICS

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

PARAMETER	CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNIT
FORWARD VOLTAGE	I_F = 200 mA	V_F			1.20	V
POWER DISSIPATION	T_L = 50°C	P_D			3.0	W
OPERATING TEMPERATURE		T_J	-55		+150	°C
STORAGE TEMPERATURE		T_{STG}	-65		+175	°C

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	LIMIT	UNIT
TYPICAL THERMAL RESISTANCE JUNCTION TO AMBIENT	$R_{\theta JA}$	85	°C/W

Note：1. Mounted on FR-4 PCB

ZGFM306V8B THRU ZGFM30200B 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
ZGFM306V8B	3Z6V8	6.46	6.8	7.14	110	2.0	700	1.00	5.0	4.0
ZGFM307V5B	3Z7V5	7.13	7.5	7.88	100	2.0	700	0.50	5.0	5.0
ZGFM308V2B	3Z8V2	7.79	8.2	8.61	91	2.0	700	0.50	5.0	6.0
ZGFM308V7B	3Z8V7	8.27	8.7	9.14	85	2.0	700	0.50	4.0	6.6
ZGFM309V1B	3Z9V1	8.65	9.1	9.56	82	3.0	700	0.50	3.0	7.0
ZGFM3010B	3Z10	9.50	10	10.50	75	4.0	700	0.50	3.0	7.6
ZGFM3011B	3Z11	10.45	11	11.55	68	4.0	700	0.25	1.0	8.4
ZGFM3012B	3Z12	11.40	12	12.60	63	4.5	700	0.25	1.0	9.1
ZGFM3013B	3Z13	12.35	13	13.65	58	5.0	700	0.25	0.5	9.9
ZGFM3015B	3Z15	14.25	15	15.75	50	7.0	700	0.25	0.5	11.4
ZGFM3016B	3Z16	15.20	16	16.80	47	8.0	700	0.25	0.5	12.2
ZGFM3018B	3Z18	17.10	18	18.90	42	10.0	750	0.25	0.5	13.7
ZGFM3020B	3Z20	19.00	20	21.00	37	11.0	750	0.25	0.5	15.2
ZGFM3022B	3Z22	20.90	22	23.10	34	12.0	750	0.25	0.5	16.7
ZGFM3024B	3Z24	22.80	24	25.20	31	13.0	750	0.25	0.5	18.2
ZGFM3027B	3Z27	25.65	27	28.35	28	18.0	750	0.25	0.5	20.6
ZGFM3030B	3Z30	28.50	30	31.50	25	20.0	1000	0.25	0.5	22.8
ZGFM3033B	3Z33	31.35	33	34.65	23	23.0	1000	0.25	0.5	25.4
ZGFM3036B	3Z36	34.20	36	37.80	21	25.0	1000	0.25	0.5	27.4
ZGFM3039B	3Z39	37.05	39	40.95	19	30.0	1500	0.25	0.5	29.7
ZGFM3043B	3Z43	40.85	43	45.15	17	35.0	1500	0.25	0.5	32.7
ZGFM3047B	3Z47	44.65	47	49.35	16	40.0	1500	0.25	0.5	35.8
ZGFM3051B	3Z51	48.45	51	53.55	15	48.0	1500	0.25	0.5	38.8
ZGFM3056B	3Z56	53.20	56	58.80	13	55.0	2000	0.25	0.5	42.6
ZGFM3062B	3Z62	58.90	62	65.10	12	60.0	2000	0.25	0.5	47.1
ZGFM3068B	3Z68	64.60	68	71.40	11	75.0	2000	0.25	0.5	51.7
ZGFM3075B	3Z75	71.25	75	78.75	10	90.0	2000	0.25	0.5	56.0
ZGFM3082B	3Z82	77.90	82	86.10	9.1	100	3000	0.25	0.5	62.2
ZGFM3091B	3Z91	86.45	91	95.55	8.2	125	3000	0.25	0.5	69.2
ZGFM30100B	3Z100	95.00	100	105.0	7.5	175	3000	0.25	0.5	76.0
ZGFM30110B	3Z110	104.50	110	115.5	6.8	250	4000	0.25	0.5	83.6
ZGFM30120B	3Z120	114.00	120	126.0	6.3	325	4500	0.25	0.5	91.2
ZGFM30130B	3Z130	123.50	130	136.5	5.8	400	5000	0.25	0.5	98.8
ZGFM30150B	3Z150	142.50	150	157.5	5.0	575	6000	0.25	0.5	114.0
ZGFM30160B	3Z160	152.00	160	168.0	4.7	650	6500	0.25	0.5	121.6
ZGFM30180B	3Z180	171.00	180	189.0	4.2	725	7000	0.25	0.5	136.8
ZGFM30200B	3Z200	190.00	200	210.0	3.7	900	8000	0.25	0.5	152.0

Note : Suffix B denotes 5% tolerance of Zener voltage

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RATINGS AND CHARACTERISTIC CURVES

FIG. 1 Typical Thermal Response L

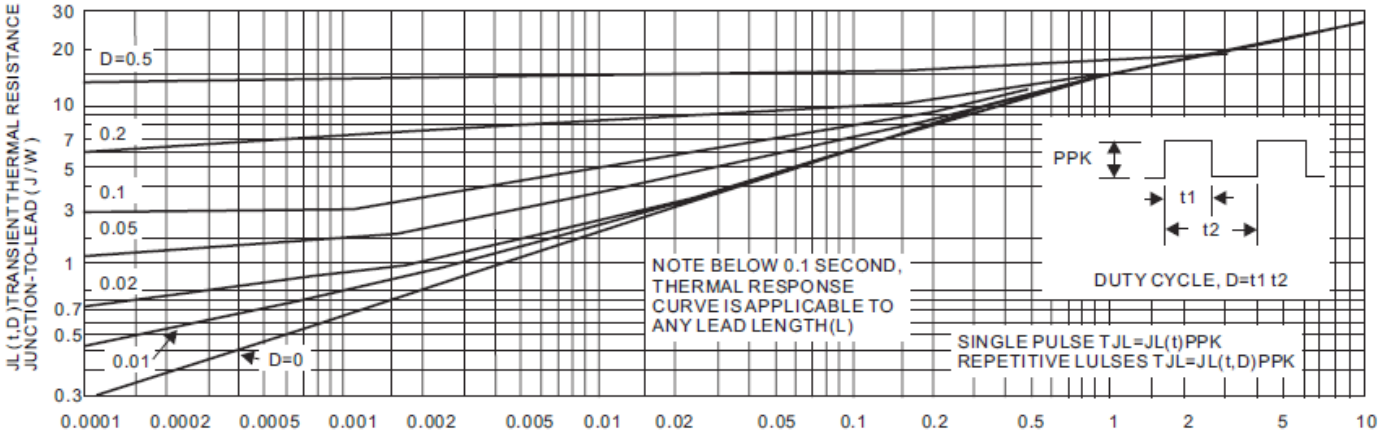

FIG. 2 Maximum Surge Power

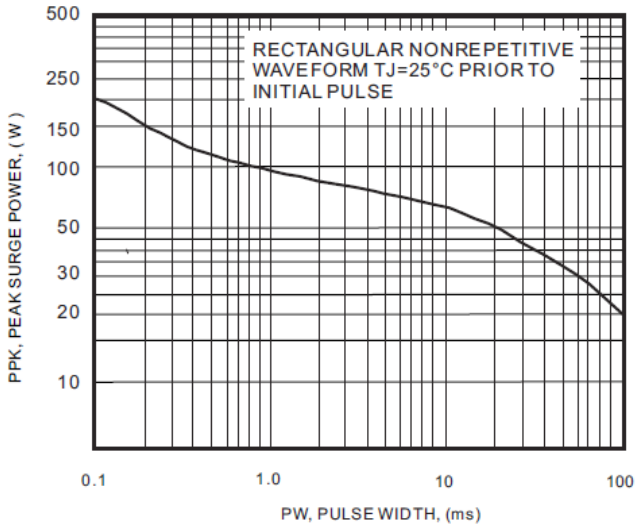

FIG. 3 Maximum Surge Power

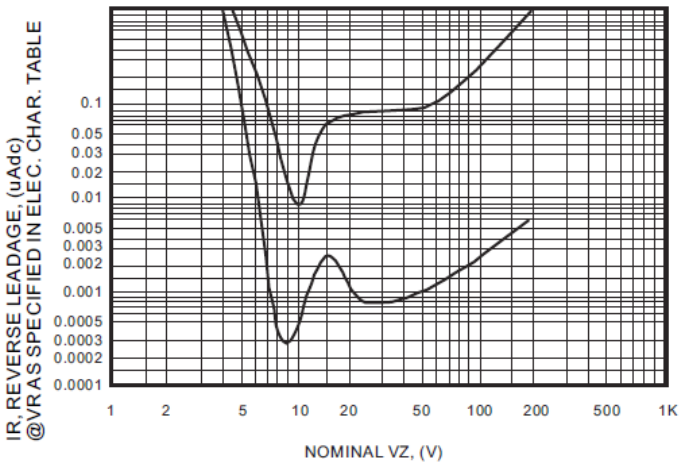

FIG.4 Units To 12 Volts

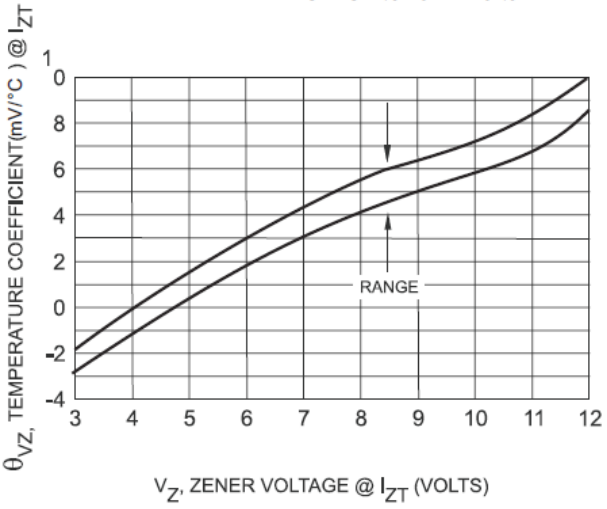

FIG 5. Units 10 To200 Volts

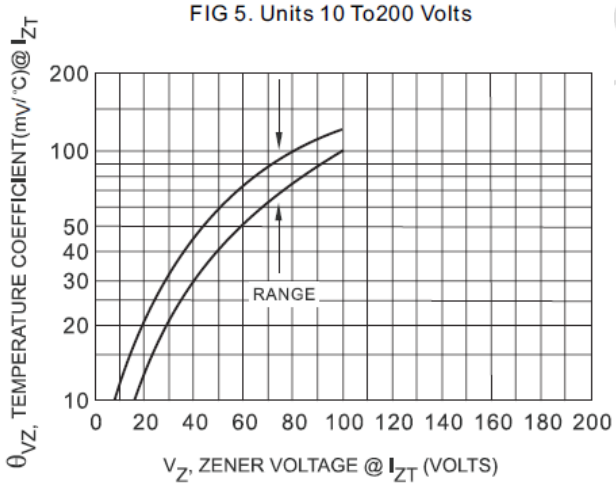

FIG.6 To 10 Volts

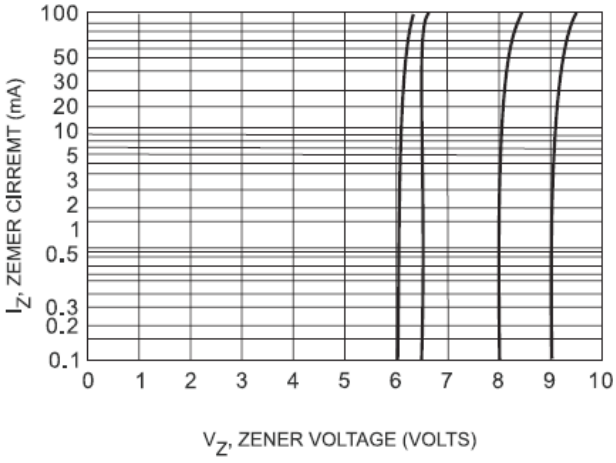

FIG.7 VZ = 12 Thru 82 Volts

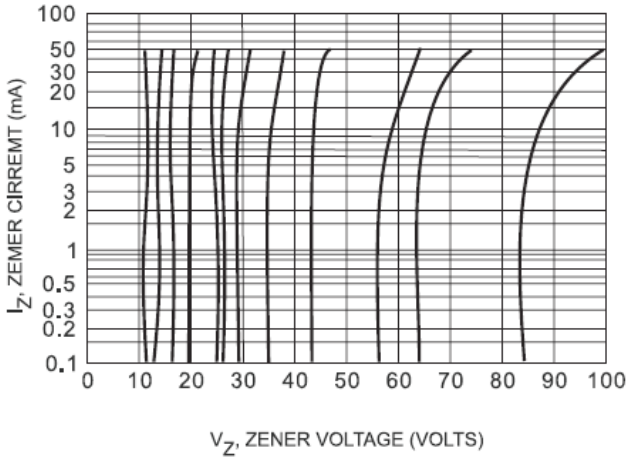

FIG. 8 Typical Thermal Resistance

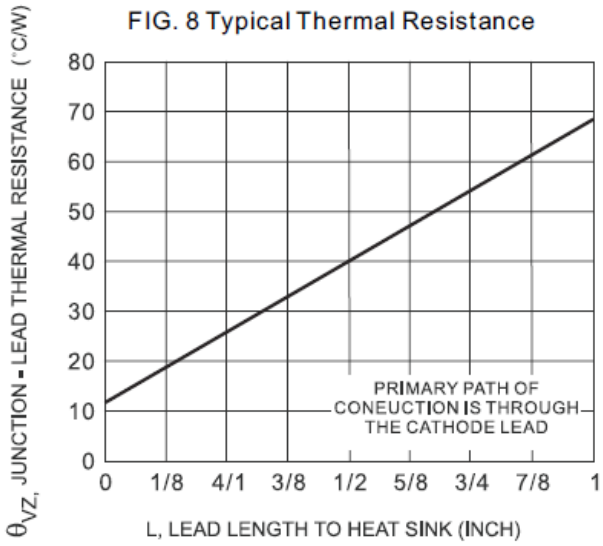

FIG.9 STEADY STATE POWER DERATING