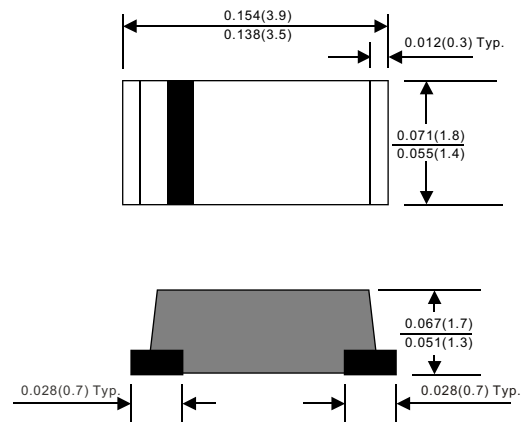


ZGFM103V3-M THRU ZGFM10100-M

SURFACE MOUNT ZENER TYPE

SOD-123



Dimensions in inches and (millimeters)

FEATURES

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Silicon epitaxial planar chip structure.
- Wide zener reverse voltage range 3.3V to 100V.
- Small package size for high density applications.
- Ideally suited for automated assembly processes.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

MECHANICAL DATA

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-123
- Terminals:Plated terminals, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any
- Weight : Approximated 0.027 gram

MAXIMUM RATINGS (at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 200 \text{ mADC}$	V_F			1.20	V
Power Dissipation		P_D			1000	mW
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			100	mA
Storage temperature		T_{STG}	-65		+175	$^{\circ}\text{C}$
Operating temperature		T_J	-55		+150	$^{\circ}\text{C}$

ZGFM103V3-M THRU ZGFM10100-M

SURFACE MOUNT ZENER TYPE

Electrical characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Part No.	Marking code	Zener voltage			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
		Min.	Nom.	Max.	mA	OHMs	OHMs	mA	uA	Volts
ZGFM103V3-M	X1	3.1	3.3	3.5	76	10	400	1.00	100	1.0
ZGFM103V6-M	X2	3.4	3.6	3.8	69	10	400	1.00	100	1.0
ZGFM103V9-M	X3	3.7	3.9	4.1	64	9	400	1.00	50	1.0
ZGFM104V3-M	X4	4.1	4.3	4.5	58	9	400	1.00	10	1.0
ZGFM104V7-M	X5	4.5	4.7	4.9	53	8	500	1.00	10	1.0
ZGFM105V1-M	X6	4.8	5.1	5.4	49	7	550	1.00	10	1.0
ZGFM105V6-M	X7	5.3	5.6	5.9	45	5	600	1.00	10	2.0
ZGFM106V2-M	X8	5.9	6.2	6.5	41	2	700	1.00	10	3.0
ZGFM106V8-M	X9	6.5	6.8	7.1	37	3.5	700	1.00	10	4.0
ZGFM107V5-M	Y1	7.1	7.5	7.9	34	4.0	700	0.50	10	5.0
ZGFM108V2-M	Y2	7.8	8.2	8.6	31	4.5	700	0.50	10	6.0
ZGFM109V1-M	Y3	8.6	9.1	9.6	28	5	700	0.50	10	7.0
ZGFM1010-M	Y4	9.5	10	10.5	25	7	700	0.25	10	7.6
ZGFM1011-M	Y5	10.5	11	11.6	23	8	700	0.25	5	8.4
ZGFM1012-M	Y6	11.4	12	12.6	21	9	700	0.25	5	9.1
ZGFM1013-M	Y7	12.4	13	13.7	19	10	700	0.25	5	9.9
ZGFM1015-M	Y8	14.3	15	15.8	17	14	700	0.25	5	11.4
ZGFM1016-M	Y9	15.2	16	16.8	15.5	16	700	0.25	5	12.2
ZGFM1018-M	Z1	17.1	18	18.9	14	20	750	0.25	5	13.7
ZGFM1020-M	Z2	19.0	20	21.0	12.5	22	750	0.25	5	15.2
ZGFM1022-M	Z3	20.9	22	23.1	11.5	23	750	0.25	5	16.7
ZGFM1024-M	Z4	22.8	24	25.2	10.5	25	750	0.25	5	18.2
ZGFM1027-M	Z5	25.7	27	28.4	9.5	35	750	0.25	5	20.6
ZGFM1030-M	Z6	28.5	30	31.5	8.5	40	1000	0.25	5	22.8
ZGFM1033-M	Z7	31.4	33	34.7	7.5	45	1000	0.25	5	25.4
ZGFM1036-M	Z8	34.2	36	37.8	7.0	50	1000	0.25	5	27.4
ZGFM1039-M	Z9	37.1	39	41.0	6.5	60	1000	0.25	5	29.7
ZGFM1043-M	ZA	40.9	43	45.2	6.0	70	1500	0.25	0.1	32.7
ZGFM1047-M	ZB	44.7	47	49.4	5.5	80	1500	0.25	0.1	35.8
ZGFM1051-M	ZC	48.5	51	53.6	5.0	95	1500	0.25	0.1	38.8
ZGFM1056-M	ZD	53.2	56	58.8	4.5	110	2000	0.25	0.1	42.6
ZGFM1062-M	ZE	58.9	62	65.1	4.0	125	2000	0.25	0.1	47.1
ZGFM1068-M	ZF	64.6	68	71.4	3.7	150	2000	0.25	0.1	51.7
ZGFM1075-M	ZG	71.3	75	78.8	3.3	175	2000	0.25	0.1	56.0
ZGFM1082-M	ZH	77.9	82	86.1	3.0	200	3000	0.25	0.1	62.2
ZGFM1091-M	ZJ	86.5	91	95.6	2.8	250	3000	0.25	0.1	69.2
ZGFM10100-M	ZK	95.0	100	105.0	2.5	350	3000	0.25	0.1	76.0

Note : 20% tolerance of Zener voltage for no suffix ex: ZGFM103V6-M is 3.6V 20%
 10% tolerance of Zener voltage for suffix "A" ex: ZGFM103V6A-M is 3.6V 10%
 5% tolerance of Zener voltage for suffix "B" ex: ZGFM103V6B-M is 3.6V 5%
 2% tolerance of Zener voltage for suffix "C" ex: ZGFM103V6C-M is 3.6V 2%

ZGFM103V3-M THRU ZGFM10100-M

SURFACE MOUNT ZENER TYPE

Rating and characteristic curves (ZGFM103V3-M THRU ZGFM10100-M)

FIG.1A Range for Units to 12 Volts

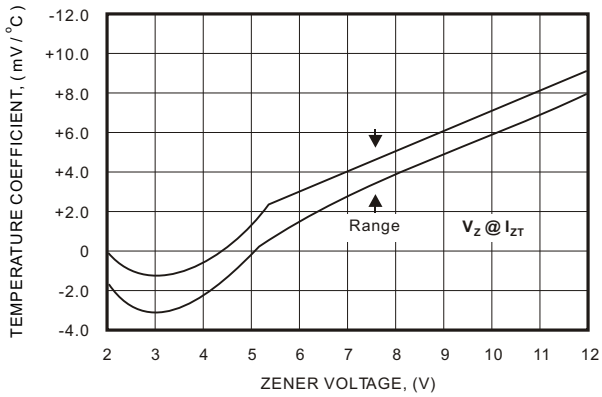


FIG.1B Range for Units to 12 to 100 Volts

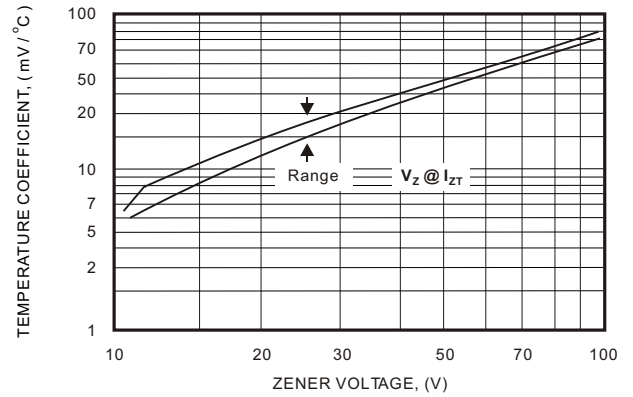


Fig. 2 Temperature Coefficients (-55°C to +150°C temperature change; 90% of the units are in the ranges indicated.)

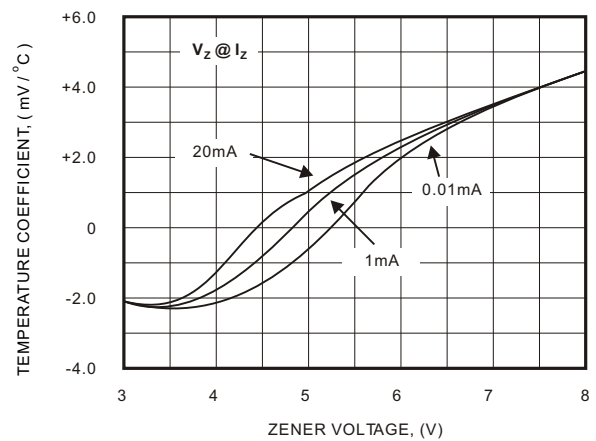
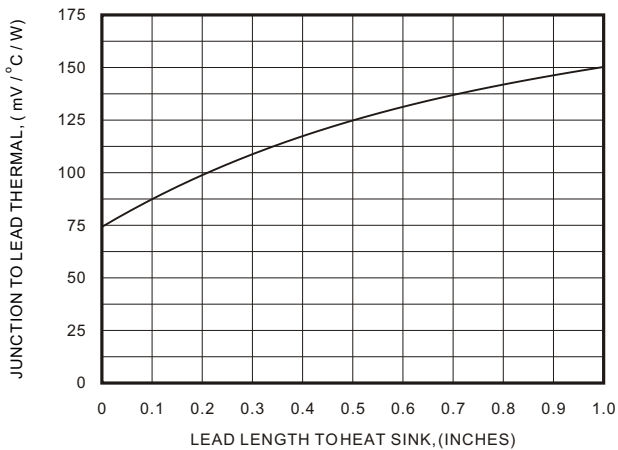


FIG.3 Typical Thermal Resistance versus Lead

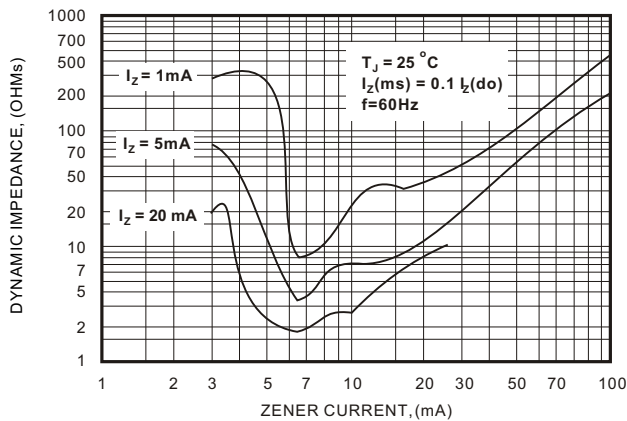


Fig 4. Effect of Zener Current

