

ZGFM052V0C-MH THRU ZGFM0539C-MH

Surface mount Zener type

Features

500mWatt Power Dissipation

High Voltages from 2.0 ~ 39V

Designed for mounting on small surface

Extremely thin/leadless package

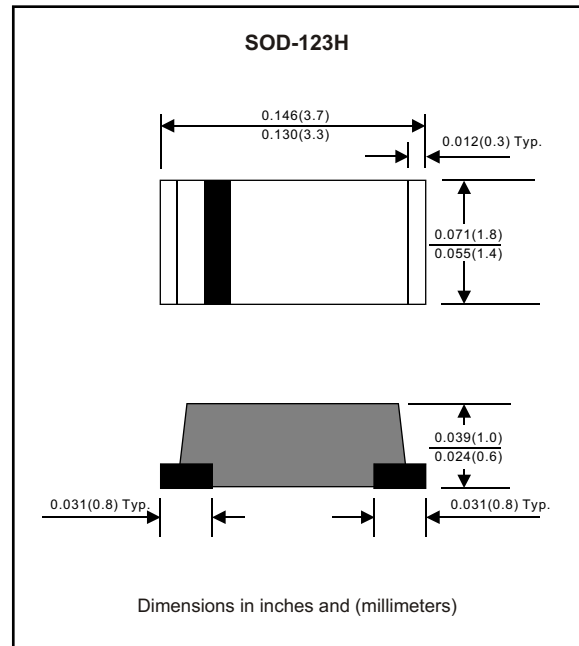
Mechanical data

Case : Molded plastic, JEDEC SOD-123-MH

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Indicated by cathode band

Mounting Position : Any



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			500	mW
Forward surge current	8.3ms single halfsine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			1000	mA
Storage temperature		T_{STG}	-55		+125	$^{\circ}\text{C}$
Operating temperature		T_J	-55		+125	$^{\circ}\text{C}$

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

Part No.	Marking code	Zener voltage	Test current	Zener impedance			Leakage current		Surge current
		$V_Z @ I_{ZT}$	I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	I_R	V_R	I_{Surge}
		Volts	mA	OHMs	OHMs	mA	uA	Volts	mA
ZGFM052V0C-MH	N1	2.0	5	100	2000	0.25	150	1.0	-0.09 ~ -0.06
ZGFM052V2C-MH	N2	2.2	5	100	2000	0.25	150	1.0	-0.09 ~ -0.06
ZGFM052V4C-MH	N3	2.4	5	100	1800	0.25	100	1.0	-0.09 ~ -0.06
ZGFM052V7C-MH	N4	2.7	5	100	1900	0.25	75	1.0	-0.09 ~ -0.06
ZGFM053V0C-MH	N6	3.0	5	95	2000	0.25	50	1.0	-0.08 ~ -0.05
ZGFM053V3C-MH	X1	3.3	5	95	2200	0.25	25	1.0	-0.08 ~ -0.05
ZGFM053V6C-MH	X2	3.6	5	90	2300	0.25	15	1.0	-0.08 ~ -0.05
ZGFM053V9C-MH	X3	3.9	5	90	2400	0.25	10	1.0	-0.08 ~ -0.05
ZGFM054V3C-MH	X4	4.3	5	88	2500	0.25	5.0	1.0	-0.06 ~ -0.03
ZGFM054V7C-MH	X5	4.7	5	70	2200	0.25	3.0	1.0	-0.05 ~ +0.02
ZGFM055V1C-MH	X6	5.1	5	50	2050	0.25	2.0	1.0	-0.02 ~ +0.02
ZGFM055V6C-MH	X7	5.6	5	25	1800	0.25	2.0	1.0	-0.05 ~ +0.05
ZGFM056V2C-MH	X8	6.2	5	10	1300	0.25	1.0	2.0	0.03 ~ 0.06
ZGFM056V8C-MH	X9	6.8	5	8	750	0.25	1.0	3.0	0.03 ~ 0.07
ZGFM057V5C-MH	Y1	7.5	5	7	600	0.25	0.5	5.0	0.03 ~ 0.07
ZGFM058V2C-MH	Y2	8.2	5	7	600	0.25	0.5	6.2	0.03 ~ 0.08
ZGFM059V1C-MH	Y3	9.1	5	10	600	0.25	0.1	6.8	0.03 ~ 0.09
ZGFM0510C-MH	Y4	10	5	15	600	0.25	0.1	7.5	0.03 ~ 0.10
ZGFM0511C-MH	Y5	11	5	18	600	0.25	0.1	8.2	0.03 ~ 0.11
ZGFM0512C-MH	Y6	12	5	22	600	0.25	0.1	9.1	0.03 ~ 0.11
ZGFM0513C-MH	Y7	13	5	25	600	0.25	0.1	10	0.03 ~ 0.11
ZGFM0515C-MH	Y8	15	5	32	600	0.25	0.1	11	0.03 ~ 0.11
ZGFM0516C-MH	Y9	16	5	36	600	0.25	0.1	12	0.03 ~ 0.11
ZGFM0518C-MH	Z1	18	5	42	600	0.25	0.1	13	0.03 ~ 0.11
ZGFM0520C-MH	Z2	20	5	48	600	0.25	0.1	15	0.03 ~ 0.11
ZGFM0522C-MH	Z3	22	5	55	600	0.25	0.1	16	0.04 ~ 0.12
ZGFM0524C-MH	Z4	24	5	62	600	0.25	0.1	18	0.04 ~ 0.12
ZGFM0527C-MH	Z5	27	5	70	600	0.25	0.1	20	0.04 ~ 0.12
ZGFM0530C-MH	Z6	30	5	78	600	0.25	0.1	22	0.04 ~ 0.12
ZGFM0533C-MH	Z7	33	5	88	700	0.25	0.1	24	0.04 ~ 0.12
ZGFM0536C-MH	Z8	36	5	95	700	0.25	0.1	27	0.04 ~ 0.12
ZGFM0539C-MH	Z9	39	5	130	800	0.25	0.1	30	0.04 ~ 0.12

Note : 5% tolerance of Zener voltage

RATING AND CHARACTERISTIC CURVES (ZGFM052V0C-MH THRU ZGFM0539C-MH)

FIG. 1-TOTAL POWER DISSIPATION VS. AMBIENT TEMPERATURE

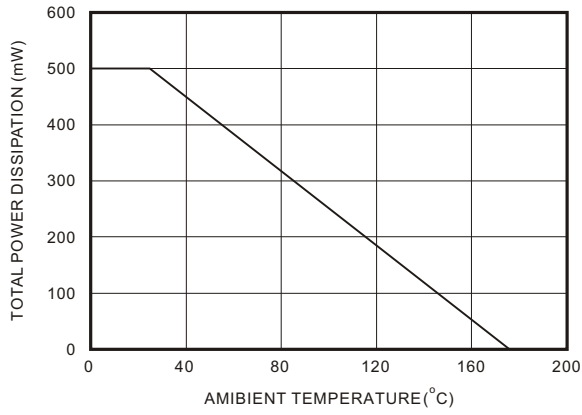


FIG. 2-TYPICAL CHANGE OF WORKING VOLTAGE UNDER OPERATING CONDITIONS AT TA=25°C

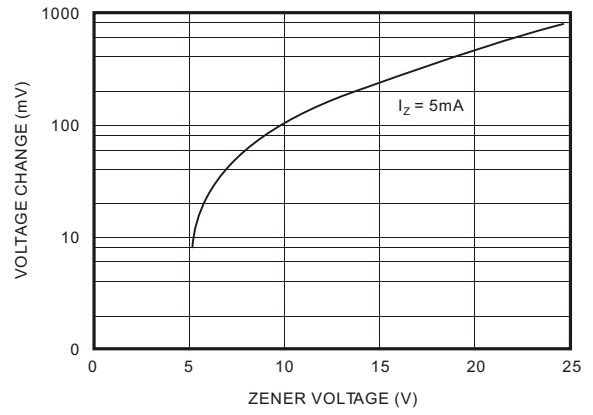


FIG. 3-TYPICAL CHANGE OF WORKING VOLTAGE VS. JUNCTION TEMPERATURE

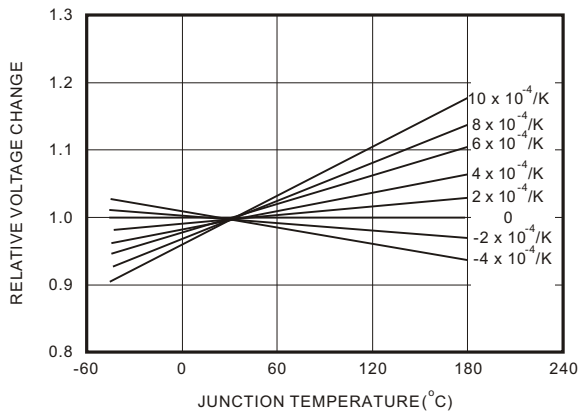


FIG. 4-TEMPERATURE COEFFICIENT OF VZ VS. Z-VOLTAGE

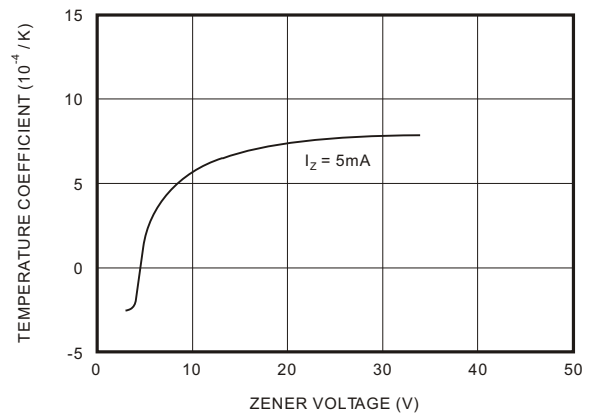
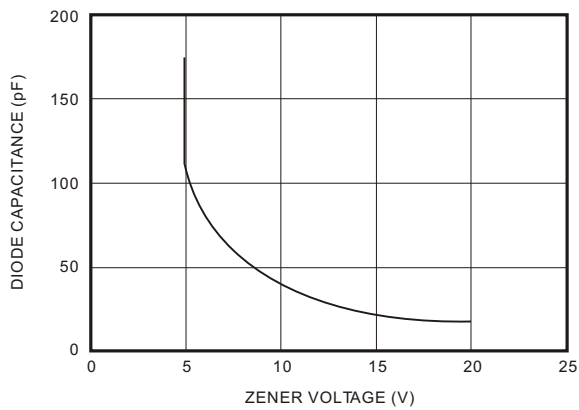


FIG. 5-DIODE CAPACITANCE VS. Z-VOLTAGE



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FIG. 6-FORWARD CURRENT VS. FORWARD VOLTAGE

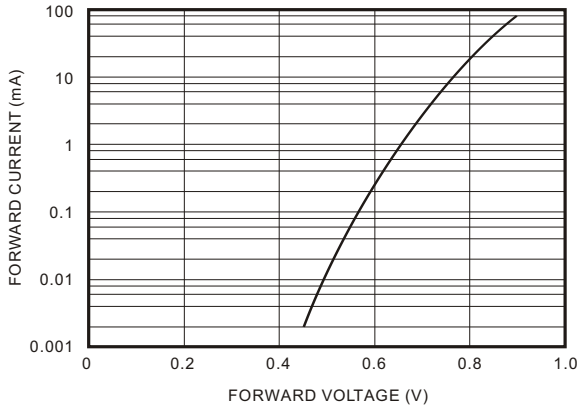


FIG. 7-Z-CURRENT VS. Z-VOLTAGE

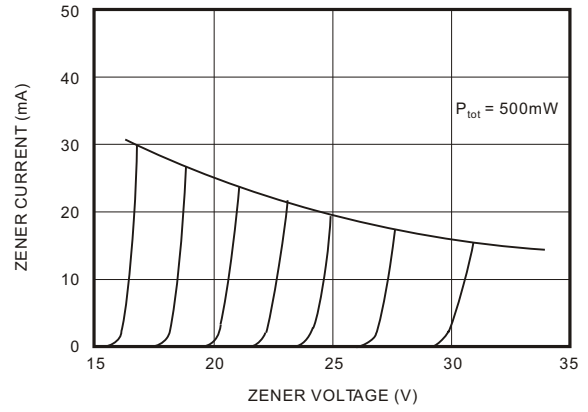


FIG. 8-Z-CURRENT VS. Z-VOLTAGE

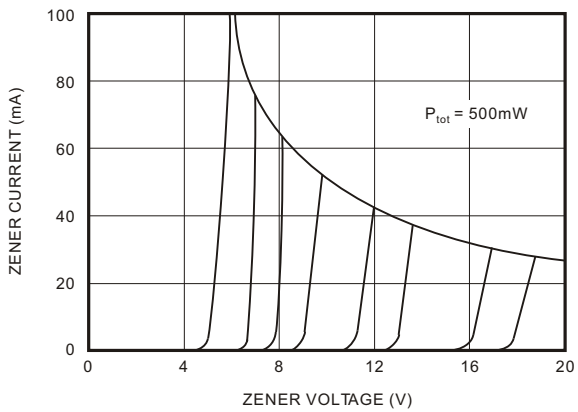


FIG. 9-DIFFERENTIAL Z-RESISTANCE VS. Z-VOLTAGE

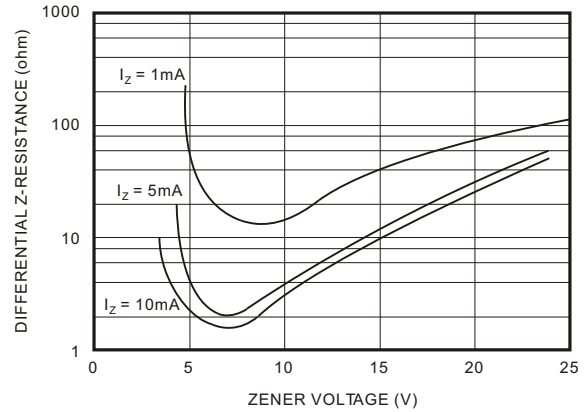


FIG. 10-THERMAL RESPONSE

