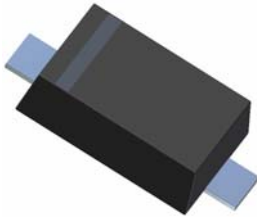
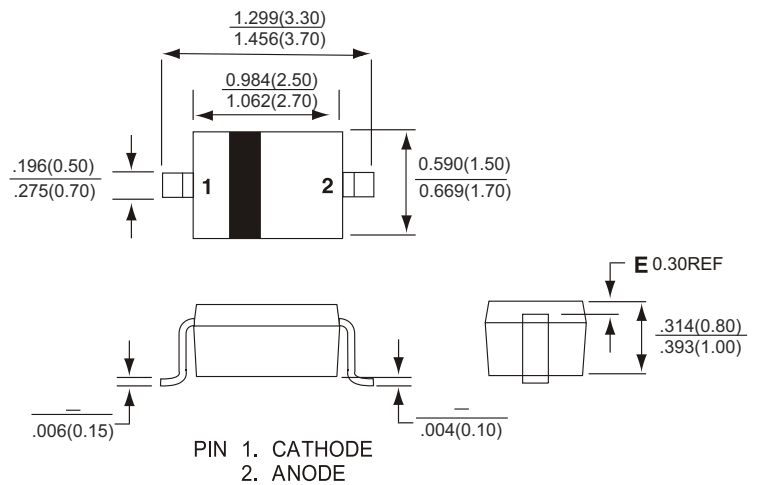


# ZGFM052V4C-MH thru ZGFM0575C-MH

## SURFACE MOUNT ZENER TYPE



SOD-123



### FEATURES

- Wide Zener Voltage Range Selection, 2.4V to 75V
- VZ Tolerance Selection of  $\pm 5\%$  (C Series)
- Flat Lead SOD-123 Plastic Package
- Surface Device Type Mounting
- Moisture Sensitivity Level 1
- Clip Bonding Construction, Good Thermal Capability
- Pb Free Version and RoHS Compliant
- Matte Tin(Sn) Lead Finish with Nickel(Ni) Underplate
- Band Indicates Cathode

### MECHANICAL DATA

Case : Molded plastic, JEDEC SOD-123  
 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)

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	500	mW
$T_{STG}$	Storage Temperature Range	-65 to +150	$^\circ\text{C}$
$T_{OPR}$	Operating Temperature Range	-65 to +150	$^\circ\text{C}$

These ratings are limiting values above which the serviceability of the diode may be impaired.

# ZGFM052V4C-MH thru ZGFM0575C-MH

## SURFACE MOUNT ZENER TYPE

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

Device Type	Device Marking	$V_Z @ I_{ZT}$ (Volts)			$I_{ZT}$ (mA)	$Z_{ZT} @ I_{ZT}$ ( $\Omega$ ) Max	$I_{ZK}$ (mA)	$Z_{ZK} @ I_{ZK}$ ( $\Omega$ ) Max	$I_R @ V_R$ ( $\mu\text{A}$ ) Max	$V_R$ (Volts)
		Min	Nom	Max						
ZGFM052V4C-MH	2V4Z	2.28	2.4	2.52	5	94	1	564	45	1
ZGFM052V7C-MH	2V7Z	2.57	2.7	2.84	5	94	1	564	18	1
ZGFM053V0C-MH	3V0Z	2.85	3.0	3.15	5	89	1	564	9	1
ZGFM053V3C-MH	3V3Z	3.14	3.3	3.47	5	89	1	564	4.5	1
ZGFM053V6C-MH	3V6Z	3.42	3.6	3.78	5	84	1	564	4.5	1
ZGFM053V9C-MH	3V9Z	3.71	3.9	4.10	5	84	1	564	2.7	1
ZGFM054V3C-MH	4V3Z	4.09	4.3	4.52	5	84	1	564	2.7	1
ZGFM054V7C-MH	4V4Z	4.47	4.7	4.94	5	75	1	470	2.7	2
ZGFM055V1C-MH	5V1Z	4.85	5.1	5.36	5	56	1	451	1.8	2
ZGFM055V6C-MH	5V6Z	5.32	5.6	5.88	5	37	1	376	0.9	2
ZGFM056V2C-MH	6V2Z	5.89	6.2	6.51	5	9	1	141	2.7	4
ZGFM056V8C-MH	6V8Z	6.46	6.8	7.14	5	14	1	75	1.8	4
ZGFM057V5C-MH	7V5Z	7.11	7.5	7.86	5	14	1	75	0.9	5
ZGFM058V2C-MH	8V2Z	7.79	8.2	8.61	5	14	1	75	0.63	5
ZGFM059V1C-MH	9V1Z	8.65	9.1	9.56	5	14	1	94	0.45	6
ZGFM0510C-MH	10VZ	9.50	10	10.50	5	18	1	141	0.18	7
ZGFM0511C-MH	11VZ	10.45	11	11.55	5	18	1	141	0.09	8
ZGFM0512C-MH	12VZ	11.40	12	12.60	5	23	1	141	0.09	8
ZGFM0513C-MH	13VZ	12.35	13	13.65	5	28	1	160	0.09	8
ZGFM0515C-MH	15VZ	14.25	15	15.75	5	28	1	188	0.045	10.5
ZGFM0516C-MH	16VZ	15.20	16	16.80	5	37	1	188	0.045	11.2
ZGFM0518C-MH	18VZ	17.10	18	18.90	5	42	1	212	0.045	12.6
ZGFM0520C-MH	20VZ	19.00	20	21.00	5	51	1	212	0.045	14.0

Device Type	Device Marking	$V_Z @ I_{ZT}$ (Volts)			$I_{ZT}$ (mA)	$Z_{ZT} @ I_{ZT}$ ( $\Omega$ ) Max	$I_{ZK}$ (mA)	$Z_{ZK} @ I_{ZK}$ ( $\Omega$ ) Max	$I_R @ V_R$ ( $\mu\text{A}$ ) Max	$V_R$ (Volts)
		Min	Nom	Max						
ZGFM0522C-MH	22VZ	20.90	22	23.10	5	51	1	235	0.045	15.4
ZGFM0524C-MH	24VZ	22.80	24	25.20	5	65	1	235	0.045	16.8
ZGFM0527C-MH	27VZ	25.65	27	28.35	5	75	0.5	282	0.045	18.9
ZGFM0530C-MH	30VZ	28.50	30	31.50	5	75	0.5	282	0.045	21.0
ZGFM0533C-MH	33VZ	31.35	33	34.65	5	75	0.5	306	0.045	23.0
ZGFM0536C-MH	36VZ	34.20	36	37.80	5	84	0.5	329	0.045	25.2
ZGFM0539C-MH	39VZ	37.05	39	40.95	5	122	0.5	329	0.045	27.3
ZGFM0543C-MH	43VZ	40.85	43	45.15	5	141	0.5	353	0.045	30.1
ZGFM0547C-MH	47VZ	44.65	47	49.35	5	160	0.5	353	0.045	33.0
ZGFM0551C-MH	51VZ	48.45	51	53.55	5	169	0.5	376	0.045	35.7
ZGFM0556C-MH	56VZ	53.20	56	58.80	5	188	0.5	400	0.045	39.2
ZGFM0562C-MH	62VZ	58.90	62	65.10	5	202	0.5	423	0.045	43.4
ZGFM0568C-MH	68VZ	64.60	68	71.40	5	226	0.5	447	0.045	47.6
ZGFM0575C-MH	75VZ	71.25	75	78.75	5	240	0.5	470	0.045	52.5

$V_F$  Forward Voltage = 900mV Maximum @  $I_F = 10$  mA for all types

#### Notes:

1. The Zener Voltage ( $V_Z$ ) is tested under pulse condition of 10mS.
2. The device numbers listed have a standard tolerance on the nominal zener voltage of  $\pm 5\%$ .
3. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest YEASHIN representative.
4. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed to  $I_{ZT}$  or  $I_{ZK}$ .

# ZGFM052V4C-MH thru ZGFM0575C-MH

## SURFACE MOUNT ZENER TYPE

### RATING AND CHARACTERISTICS CURVES ZGFM052V4C-MH THRU ZGFM0575C-MH

FIG.1-TOTAL POWER DISSIPATION VS. AMBIENT TEMPERATURE

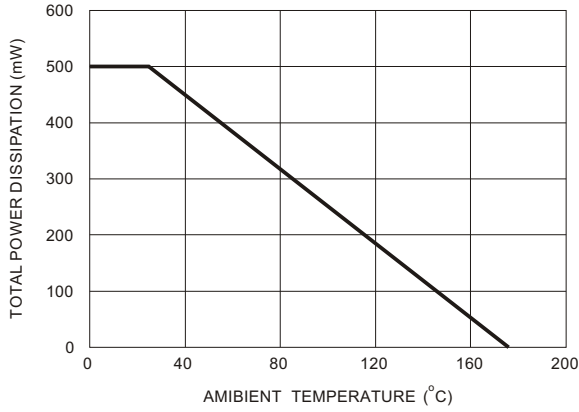


FIG. 2-TYPICAL CHANGE OF WORKING VOLTAGE UNDER OPERATING CONDITIONS AT T<sub>A</sub> =25°C

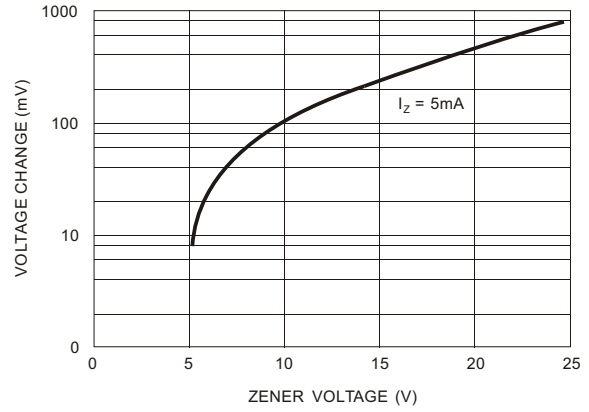


FIG. 3-TYPICAL CHANGE OF WORKING VOLTAGE VS. JUNCTION TEMPERATURE

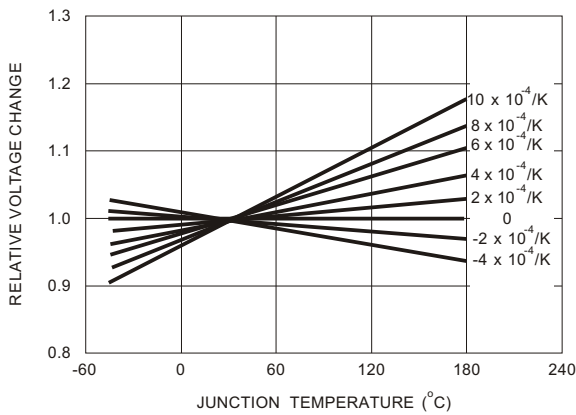


FIG. 4-TEMPERATURE COEFFICIENT OF VZ VS. Z-VOLTAGE

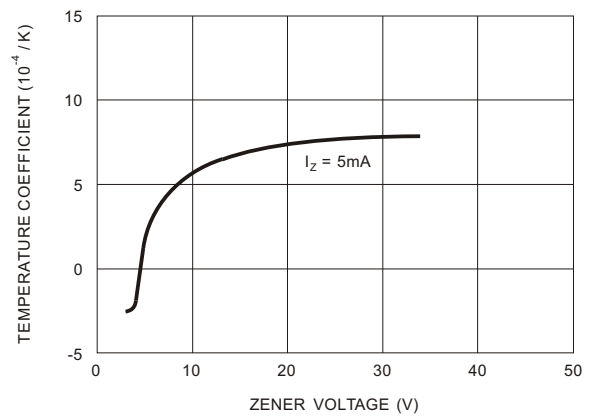
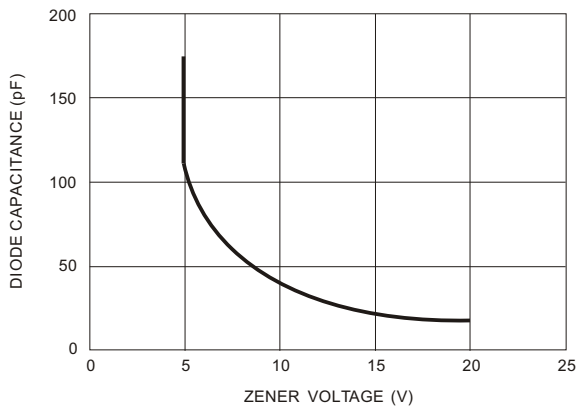


FIG. 5-DIODE CAPACITANCE VS. Z-VOLTAGE



# ZGFM052V4C-MH thru ZGFM0575C-MH

## SURFACE MOUNT ZENER TYPE

### RATING AND CHARACTERISTICS CURVES ZGFM052V4C-MH THRU ZGFM0575C-MH

FIG. 6-FORWARD CURRENT VS. FORWARD VOLTAGE

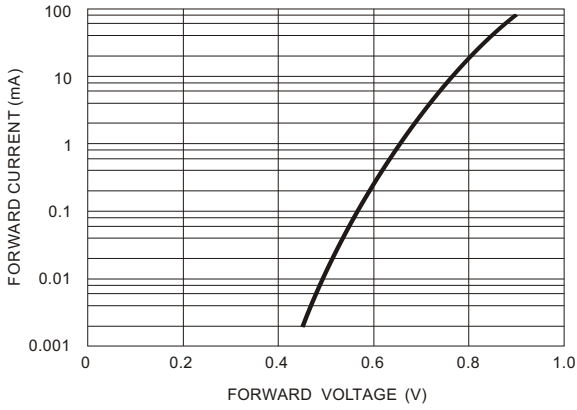


FIG. 7-Z-CURRENT VS. Z-VOLTAGE

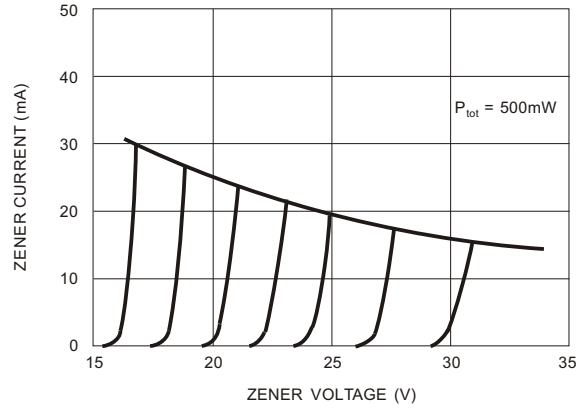


FIG. 8-Z-CURRENT VS. Z-VOLTAGE

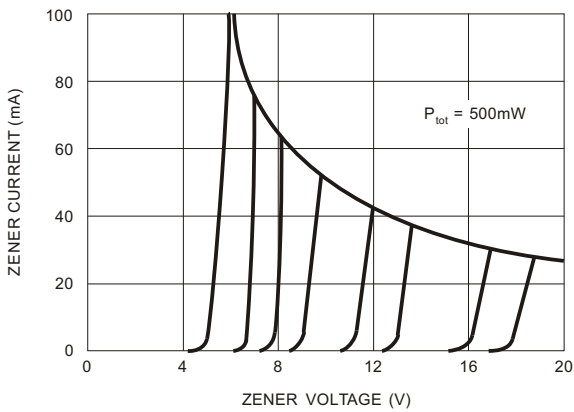


FIG. 9-DIFFERENTIAL Z-RESISTANCE VS. Z-VOLTAGE

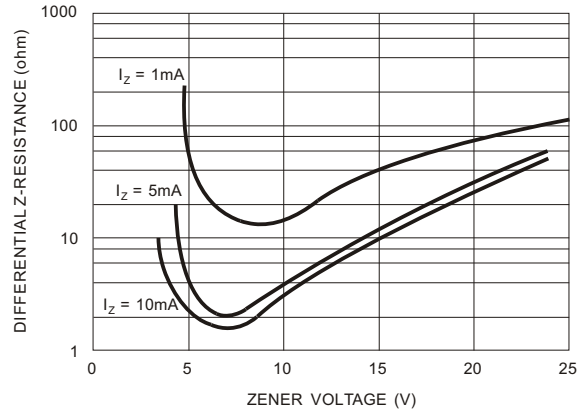


FIG. 10-THERMAL RESPONSE

