Innovative Service Around the Globe YAGEO

DATA SHEET

ZENER DIODES
GENERAL VOLTAGE REGULATION

MM5Z SERIES

RoHS compliant & Halogen free

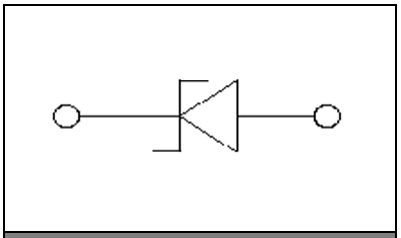
Product specification– August 27, 2026 V.1



Zener Diodes

Features

- High reliability
- Very sharp reverse characteristic
- Low reverse current level
- Standard Zener Breakdown Voltage Range 2.0 V to 75 V



Pin Configuration

Mechanical Data

- Package: SOD523
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Cathode line denotes the cathode end

Absolute Maximum Ratings (Ta = 25℃)

Parameter	Symbol	Value	Unit
Power Dissipation at Ta=25℃	P_D	200	mW
Forward Voltage at I_F=10mA	V_F	1.0	V
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	625	°C /W
Storage Temperature Range	Tstg	-55~+150	°C
Maximum Junction Temperature	T_J	-55~+150	°C

Characteristics at Ta = 25℃

Part Number	Marking Code	Vzt (V)@Izt			Izt	Zzt@Izt	Izk	Zzk@Izk	I_R@V_R	V_R
		Min	Nom	Max	(mA)	Max(Ω)	(mA)	Max(Ω)	Max(uA)	(V)
MM5Z2V4	50.	2.28	2.4	2.52	5	100	1	1000	50	1
MM5Z2V7	51.	2.57	2.7	2.84	5	100	1	1000	20	1
MM5Z3V0	52.	2.85	3	3.15	5	100	1	1000	10	1
MM5Z3V3	53.	3.14	3.3	3.47	5	95	1	1000	5	1
MM5Z3V6	54.	3.42	3.6	3.78	5	90	1	1000	5	1
MM5Z3V9	55.	3.71	3.9	4.1	5	90	1	1000	3	1
MM5Z4V3	56.	4.09	4.3	4.52	5	90	1	1000	3	1
MM5Z4V7	57.	4.47	4.7	4.94	5	80	1	800	3	2
MM5Z5V1	58.	4.85	5.1	5.36	5	60	1	500	2	2
MM5Z5V6	59.	5.32	5.6	5.88	5	40	1	200	1	2
MM5Z6V2	5A.	5.8	6.2	6.6	5	10	1	100	3	4
MM5Z6V8	5B.	6.4	6.8	7.2	5	15	1	160	2	4
MM5Z7V5	5C.	7	7.5	7.9	5	15	1	160	1	5
MM5Z8V2	5D.	7.7	8.2	8.7	5	15	1	160	0.7	5
MM5Z9V1	5E.	8.5	9.1	9.6	5	15	1	160	0.2	7

Part Number	Marking Code	Vzt (V)@Izt			Izt	Zzt@Izt	Izk	Zzk@Izk	I_R@V_R	V_R
		Min	Nom	Max	(mA)	Max(Ω)	(mA)	Max(Ω)	Max(uA)	(V)
MM5Z10V	5F.	9.4	10	10.6	5	20	1	160	0.1	8
MM5Z11V	5G.	10.4	11	11.6	5	20	1	160	0.1	8
MM5Z12V	5H.	11.4	12	12.7	5	25	1	80	0.1	8
MM5Z13V	5J.	12.4	13	14.1	5	30	1	80	0.1	8
MM5Z15V	5K.	14.3	15	15.6	5	30	1	80	0.05	10.5
MM5Z16V	5L.	15.3	16	17.1	5	40	1	80	0.05	11.2
MM5Z18V	5M.	16.8	18	19.1	5	45	1	80	0.05	12.6
MM5Z20V	5N.	18.8	20	21.2	5	55	1	100	0.05	14
MM5Z22V	5P.	20.8	22	23.3	5	55	1	100	0.05	15.4
MM5Z24V	5R.	22.8	24	25.6	5	70	1	120	0.05	16.8
MM5Z27V	5S.	25.1	27	28.9	2	80	0.5	300	0.05	18.9
MM5Z30V	5T.	28	30	32	2	80	0.5	300	0.05	21
MM5Z33V	5U.	31	33	35	2	80	0.5	300	0.05	23.2
MM5Z36V	5V.	34	36	38	2	90	0.5	500	0.05	25.2
MM5Z39V	5X.	37	39	41	2	130	0.5	500	0.05	27.3
MM5Z43V	5Y.	40	43	46	2	150	0.5	500	0.05	30.1
MM5Z47V	5Z.	44	47	50	2	170	0.5	500	0.05	32.9
MM5Z51V	Y17.	48	51	54	2	180	0.5	400	0.05	35.7
MM5Z56V	Y18.	53	56	59	2	200	1	1000	0.1	42
MM5Z62V	Y19.	58	62	66	2	215	0.5	450	0.05	43.4
MM5Z68V	Y20.	64	68	72	2	240	0.5	475	0.05	47.6
MM5Z75V	Y21.	70	75	79	2	255	0.5	500	0.05	52.5

Electrical Characteristic Curves

Figure 1. Breakdown Characteristics

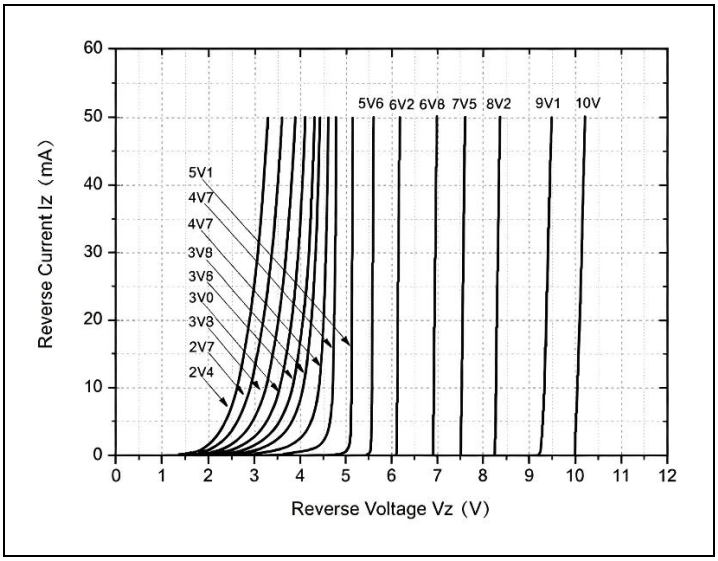


Figure 2. Breakdown characteristic

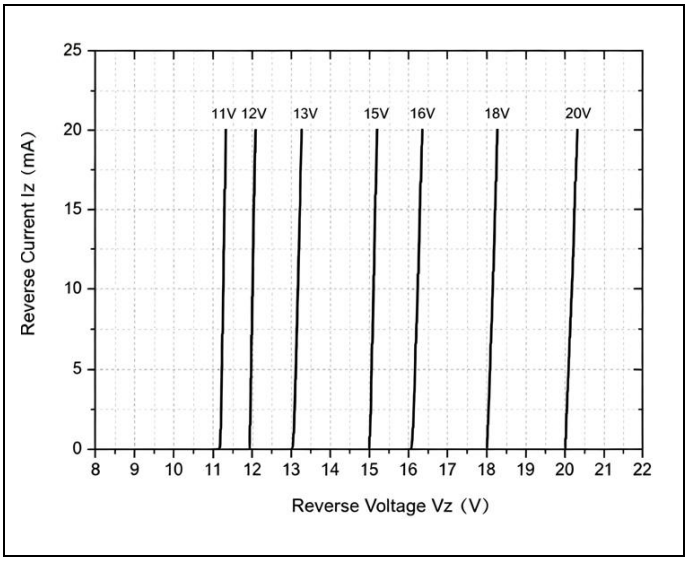
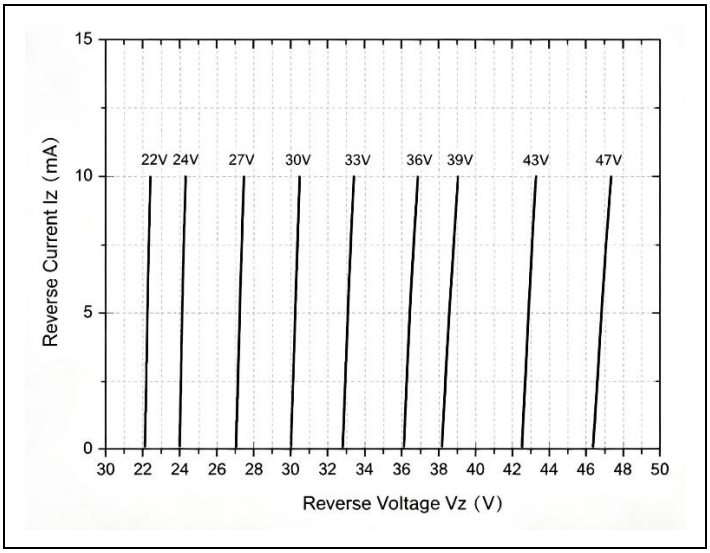
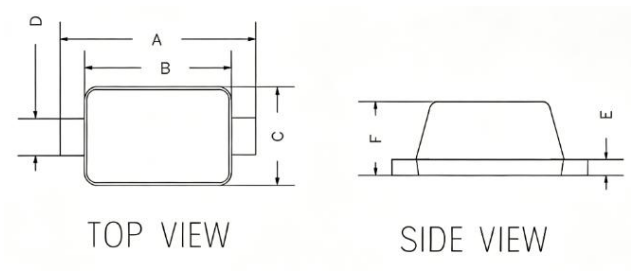
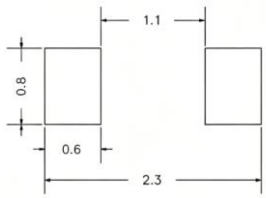


Figure 3. Breakdown Characteristics



Dimensions (SOD-523)





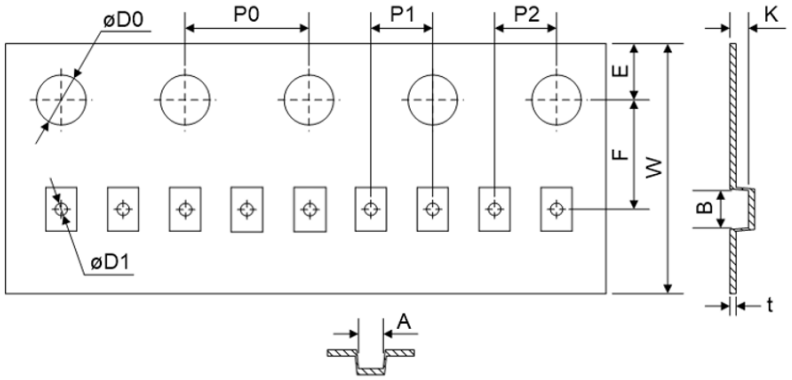
UNIT: mm

SUGGESTED SOLDER PAD LAYOUT

Symbol	Dimension（mm）			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.70	0.059	0.067
B	1.10	1.30	0.043	0.051
C	0.70	0.90	0.028	0.035
D	0.25	0.35	0.010	0.014
E	0.05	0.20	0.002	0.008
F	0.50	0.70	0.020	0.028

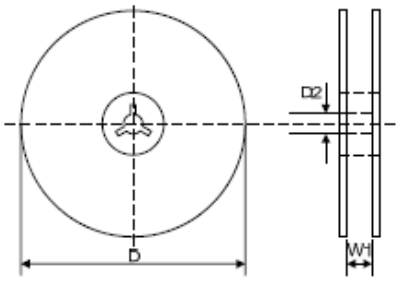
Packaging

Tape



Symbol	Dimension (mm)
W	8.00+0.3/-0.1
P0	4.00±0.10
P1	2.00±0.10
P2	2.00±0.10
D0	Φ1.55±0.05
D1	Φ0.40±0.15
E	1.75±0.10
F	3.50±0.05
A	0.91±0.05
B	1.79±0.05
K	0.68±0.05
t	0.20±0.02

Reel



D	Φ178±1.0
D2	Φ13.5±0.3
W1	9.3±1.5
Quantity: 8000PCS	

LEGAL DISCLAIMER

YAGEO, its distributors and agents (collectively, “YAGEO”), hereby disclaims any and all liabilities for any errors, inaccuracies or incompleteness contained in any product related information, including but not limited to product specifications, datasheets, pictures and/or graphics. YAGEO may make changes, modifications and/or improvements to product related information at any time and without notice.

YAGEO makes no representation, warranty, and/or guarantee about the fitness of its products for any particular purpose or the continuing production of any of its products. To the maximum extent permitted by law, YAGEO disclaims (i) any and all liability arising out of the application or use of any YAGEO product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for a particular purpose, non -infringement and merchantability.

YAGEO products are designed for general purpose applications under normal operation and usage conditions. Please contact YAGEO for the applications listed below which require especially high reliability for the prevention of defects which might directly cause damage to the third party's life, body or property: Aerospace equipment (artificial satellite, rocket, etc.), Atomic energy-related equipment, Aviation equipment, Disaster prevention equipment, crime prevention equipment, Electric heating apparatus, burning equipment, Highly public information network equipment, data-processing equipment , Medical devices, Military equipment, Power generation control equipment, Safety equipment, Traffic signal equipment, Transportation equipment and Undersea equipment, or for any other application or use in which the failure of YAGEO products could result in personal injury or death, or serious property damage. Particularly **YAGEO Corporation and its affiliates do not recommend the use of commercial, automotive, and/or COTS grade products for high reliability applications or manned space flight.**

Information provided here is intended to indicate product specifications only. YAGEO reserves all the rights for revising this content without further notification, as long as products are unchanged. Any product change will be announced by PCN.