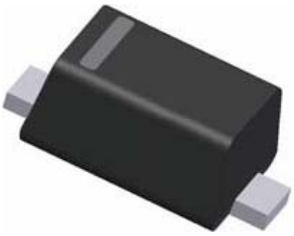
FAIRCHILD SEMICONDUCTOR®

March 2008

MM5Z2V4 - MM5Z75V
Zener Diodes

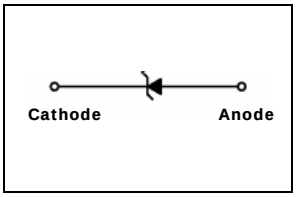
Features

- Wide Zener Voltage Range Selection, 2.4V to 75V
- Flat Lead, Surface Mount Device Under 0.70mm Height
- Extremely Small Outline Plastic Package SOD523F
- Moisture Sensitivity Level 1
- Pb Free Version and RoHS Compliant
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode
- Green Mold Compound



SOD-523F

Electrical Symbol



Absolute Maximum Ratings

T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
P_D	Power Dissipation	200	mW
T_{STG}	Storage Temperature Range	-55 to +150	°C
T_{OPR}	Operating Temperature Range	-55 to +150	°C

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

Thermal Characteristics

Symbol	Parameter	Value	Unit
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	500	°C/W

* Device mounted on FR-4 PCB minimum land pad.

Package Marking and Ordering Information

Device Marking	Device	Package	Packing	Reel Size	Tape Width	Quantity
Refer to Product table list	Refer to Product table list	SOD-523F	Tape & Reel	7”	12mm	3,000

Electrical Characteristics

T_A=25°C unless otherwise noted

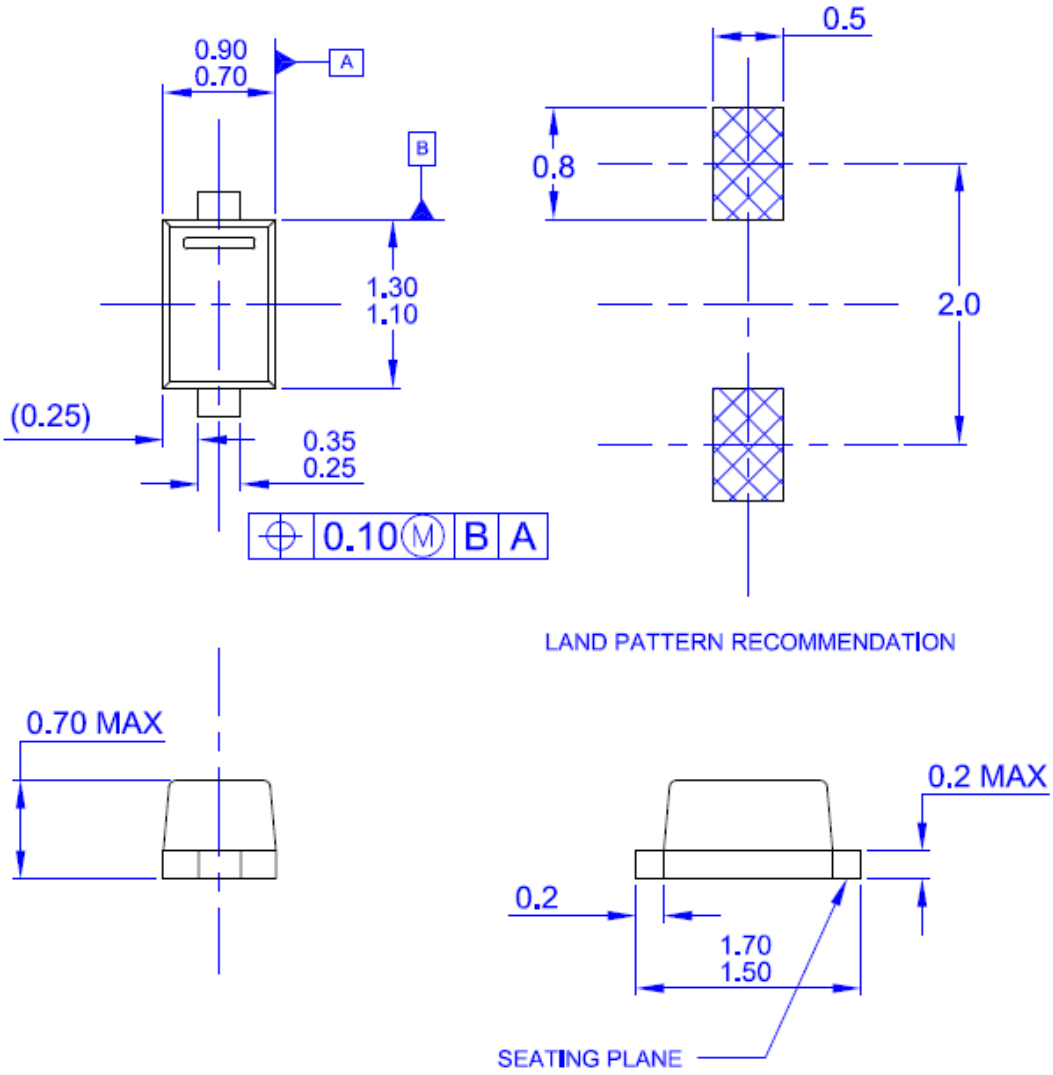
Device Type	Device Marking	V_Z (V) @ I_{ZT}			Z_{ZT}(Ω) @ I_{ZT}	I_{ZT} (mA)	Z_{ZK}(Ω) @ I_{ZK}	I_{ZK} (mA)	I_R(μA) @ V_R	V_R(V)
		Min.	Typ.	Max.	Max.	-	Max.	-	Max	-
MM5Z2V4	50	2.2	2.4	2.6	100	5	1000	1	50	1
MM5Z2V7	51	2.5	2.7	2.9	100	5	1000	1	20	1
MM5Z3V0	52	2.8	3.0	3.2	100	5	1000	1	10	1
MM5Z3V3	53	3.1	3.3	3.5	95	5	1000	1	5	1
MM5Z3V6	54	3.4	3.6	3.8	90	5	1000	1	5	1
MM5Z3V9	55	3.7	3.9	4.1	90	5	1000	1	3	1
MM5Z4V3	56	4.0	4.3	4.6	90	5	1000	1	3	1
MM5Z4V7	57	4.4	4.7	5.0	80	5	800	1	3	2
MM5Z5V1	58	4.8	5.1	5.4	60	5	500	1	2	2
MM5Z5V6	59	5.2	5.6	6.0	40	5	200	1	1	2
MM5Z6V2	5A	5.8	6.2	6.6	10	5	100	1	3	4
MM5Z6V8	5B	6.4	6.8	7.2	15	5	160	1	2	4
MM5Z7V5	5C	7.0	7.5	7.9	15	5	160	1	1	5
MM5Z8V2	5D	7.7	8.2	8.7	15	5	160	1	0.7	5
MM5Z9V1	5E	8.5	9.1	9.6	15	5	160	1	0.2	7
MM5Z10V	5F	9.4	10	10.6	20	5	160	1	0.1	8
MM5Z11V	5G	10.4	11	11.6	20	5	160	1	0.1	8
MM5Z12V	5H	11.4	12	12.7	25	5	80	1	0.1	8
MM5Z13V	5J	12.4	13	14.1	30	5	80	1	0.1	8
MM5Z15V	5K	14.3	15	15.8	30	5	80	1	0.05	10.5
MM5Z16V	5L	15.3	16	17.1	40	5	80	1	0.05	11.2
MM5Z18V	5M	16.8	18	19.1	45	5	80	1	0.05	12.6
MM5Z20V	5N	18.8	20	21.2	55	5	100	1	0.05	14.0
MM5Z22V	5P	20.8	22	23.3	55	5	100	1	0.05	15.4
MM5Z24V	5R	22.8	24	25.6	70	5	120	1	0.05	16.8
MM5Z27V	5S	25.1	27	28.9	80	2	300	0.5	0.05	18.9
MM5Z30V	5T	28	30	32	80	2	300	0.5	0.05	21.0
MM5Z33V	5U	31	33	35	80	2	300	0.5	0.05	23.2
MM5Z36V	5V	34	36	38	90	2	500	0.5	0.05	25.2
MM5Z39V	5X	37	39	41	130	2	500	0.5	0.05	27.3
MM5Z43V	5Y	40	43	46	150	2	500	0.5	0.05	30.1
MM5Z47V	5Z	44	47	50	170	2	500	0.5	0.05	32.9
MM5Z51V	5–	48	51	54	180	2	500	0.5	0.05	35.7
MM5Z56V	5=	52	56	60	200	2	500	0.5	0.05	39.2
MM5Z62V	5≅	58	62	66	215	2	500	0.5	0.05	43.4
MM5Z68V	5>	64	68	72	240	2	500	0.5	0.05	47.6
MM5Z75V	5<	70	75	79	255	2	500	0.5	0.05	52.5

NOTES:

1) The Zener Voltage (VZ) is tested under pulse condition of 10mS.

2) 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 (IZT or IZK) is superimposed to IZT or IZK.

SOD-523F Package Outline



NOTES: UNLESS OTHERWISE SPECIFIED

A) PACKAGE REFERENCE: THIS PACKAGE OUTLINE CONFORMS TO JEITA SC-79.
B) ALL DIMENSIONS ARE IN MILLIMETERS.
C) DRAWING CONFORMS TO ASME Y14.5M - 1994
D) DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR EXTRUSIONS.
E) LANDPATTERN RECOMMENDATION IS BASED ON IPC7351A STANDARD SOD1609X65M.
F) DRAWING NUMBER AND REVISION:MKT-SOD523F1rev1

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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