



### Features

- Standard Zener Breakdown Voltage Range – 2.0 V to 75 V
- Steady State Power Rating of 200 mW
- Small Body Outline Dimensions: 0.047" x 0.032"(1.20 mm x 0.80 mm)
- Low Body Height: 0.028" (0.7 mm)
- ESD Rating of Class 3 (>16 kV) per Human Body Model



SOD-523  
(SOD-523F)



### Package Marking and Ordering Information

Product ID	Pack	Brand	Qty(PCS)
MM5Z4V7T1G	SOD-523 (SOD-523F)	HXY MOSFET	3000

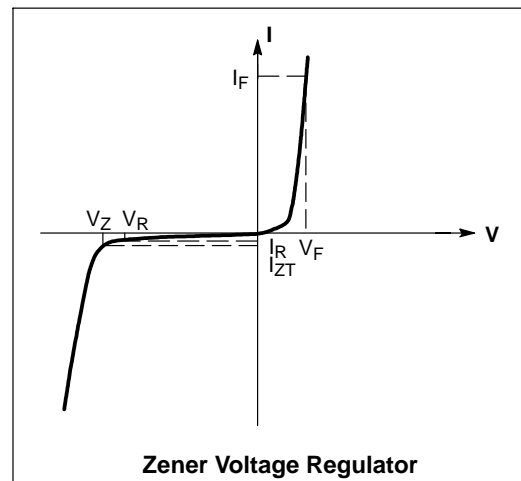
### Absolute Maximum Ratings(Ta=25°C)

Rating	Symbol	Max	Unit
Total Device Dissipation FR-5 Board, @ T <sub>A</sub> = 25°C	P <sub>D</sub>	200	mW
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	-65 to +150	°C

### Electrical Characteristics

(T<sub>A</sub> = 25°C unless otherwise noted,  
V<sub>F</sub> = 0.9 V Max. @ I<sub>F</sub> = 10 mA for all types)

Symbol	Parameter
V <sub>Z</sub>	Reverse Zener Voltage @ I <sub>ZT</sub>
I <sub>ZT</sub>	Reverse Current
Z <sub>ZT</sub>	Maximum Zener Impedance @ I <sub>ZT</sub>
I <sub>ZK</sub>	Reverse Current
Z <sub>ZK</sub>	Maximum Zener Impedance @ I <sub>ZK</sub>
I <sub>R</sub>	Reverse Leakage Current @ V <sub>R</sub>
V <sub>R</sub>	Reverse Voltage
I <sub>F</sub>	Forward Current
V <sub>F</sub>	Forward Voltage @ I <sub>F</sub>
θV <sub>Z</sub>	Maximum Temperature Coefficient of V <sub>Z</sub>
C	Max. Capacitance @ V <sub>R</sub> = 0 and f = 1 MHz



### Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted, V<sub>F</sub> = 0.9 V Max. @ I<sub>F</sub> = 10 mA for all types)

Device	Device Marking	Zener Voltage (Note 1)			Zener Impedance			Leakage Current		θV <sub>Z</sub> (mV/k) @ I <sub>ZT</sub>	C @ V <sub>R</sub> = 0 f = 1 MHz		
		V <sub>Z</sub> (Volts)			Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>R</sub> @ V <sub>R</sub>						
		Min	Nom	Max	mA	Ω	Ω	μA	Volts	Min	Max	pF	
MM5Z4V7T1G	09	4.4	4.7	5.0	5	80	800	1.0	3	2.0	-3.5	0.2	260



### Typical Characteristics

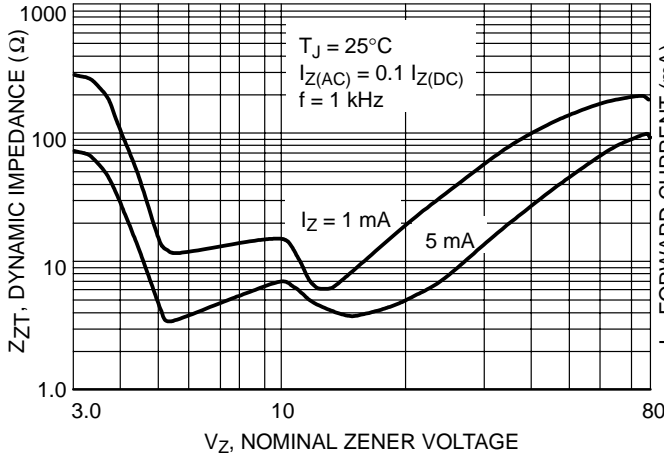


Figure 1. Effect of Zener Voltage on Zener Impedance

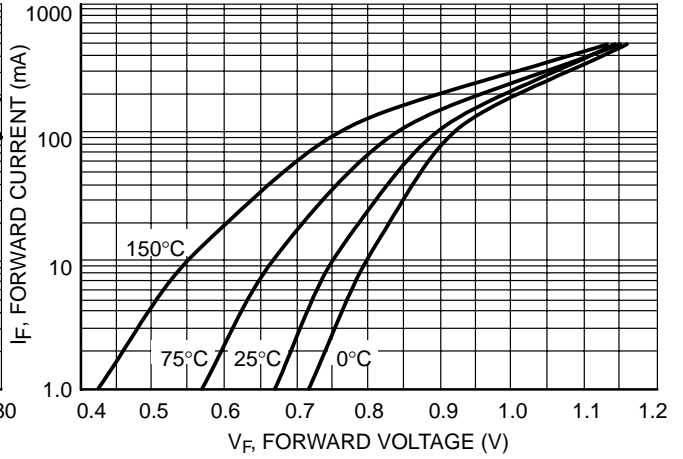


Figure 2. Typical Forward Voltage

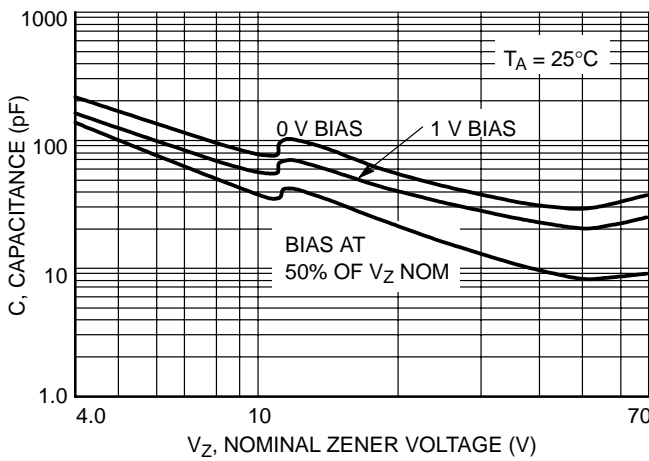


Figure 3. Typical Capacitance

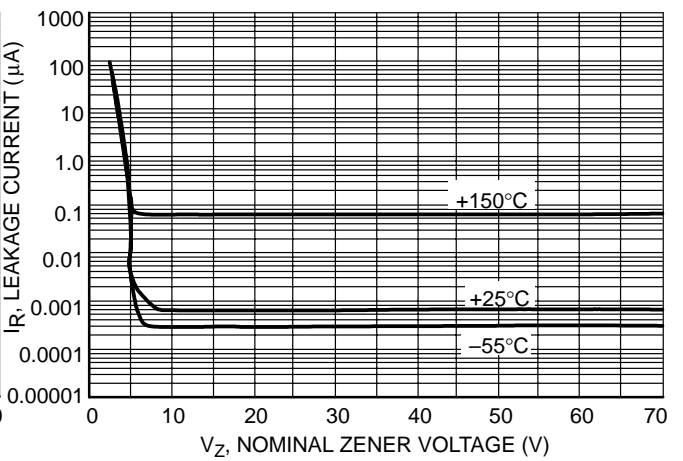


Figure 4. Typical Leakage Current



### Typical Characteristics

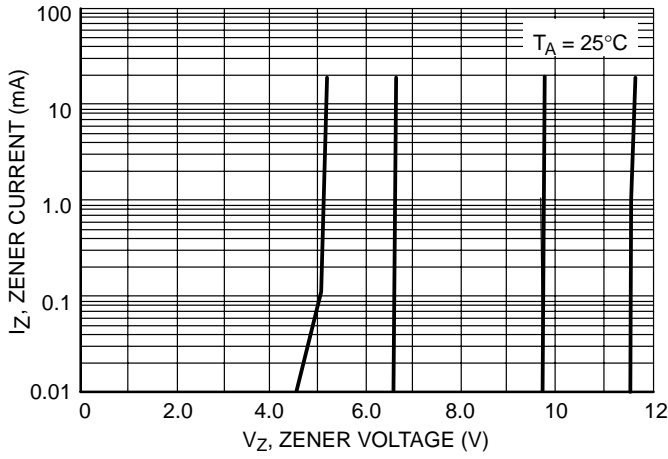


Figure 5. Zener Voltage versus Zener Current  
( $V_Z$  Up to 12 V)

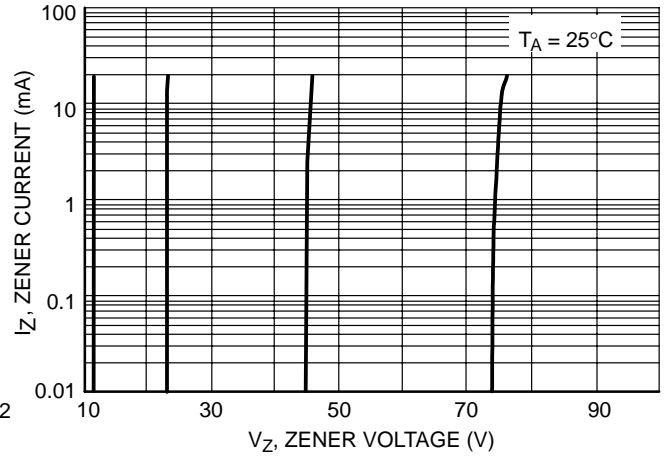


Figure 6. Zener Voltage versus Zener Current  
(12 V to 75 V)

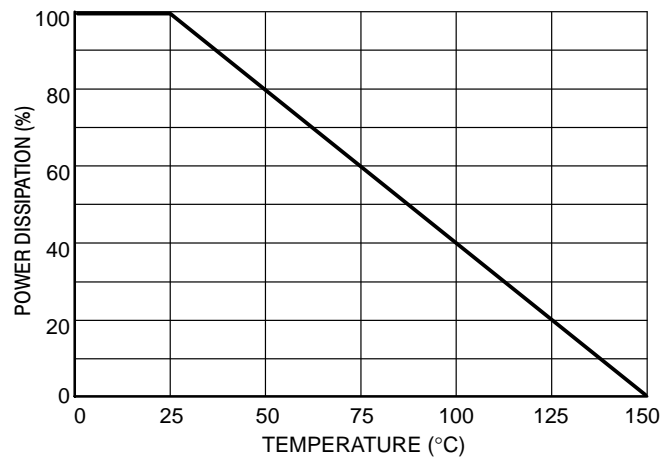
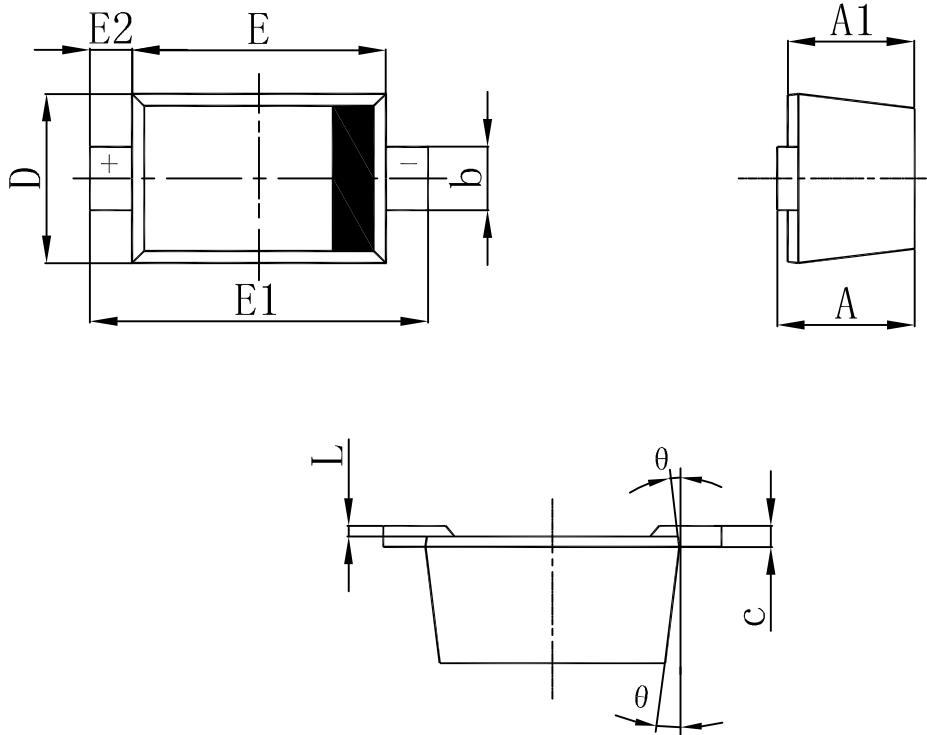


Figure 7. Steady State Power Derating



**SOD-523(SOD-523F) Package Outline Dimensions**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	



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