



Micro Commercial Components

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20736 Marilla Street Chatsworth  
CA 91311  
Phone: (818) 701-4933  
Fax: (818) 701-4939

# MMSZ4685 THRU MMSZ4701

## 500mW Silicon Zener Diodes

### Features

- Small package size for high density applications
- $V_Z$  - tolerance  $\pm 5\%$
- High Reliability
- Lead Free Finish/RoHS Compliant("P" Suffix designates RoHS Compliant See ordering information)

### Mechanical Data

- Polarity: Cathode indicated by polarity band
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0 and MSL Rating 1

### Maximum Ratings

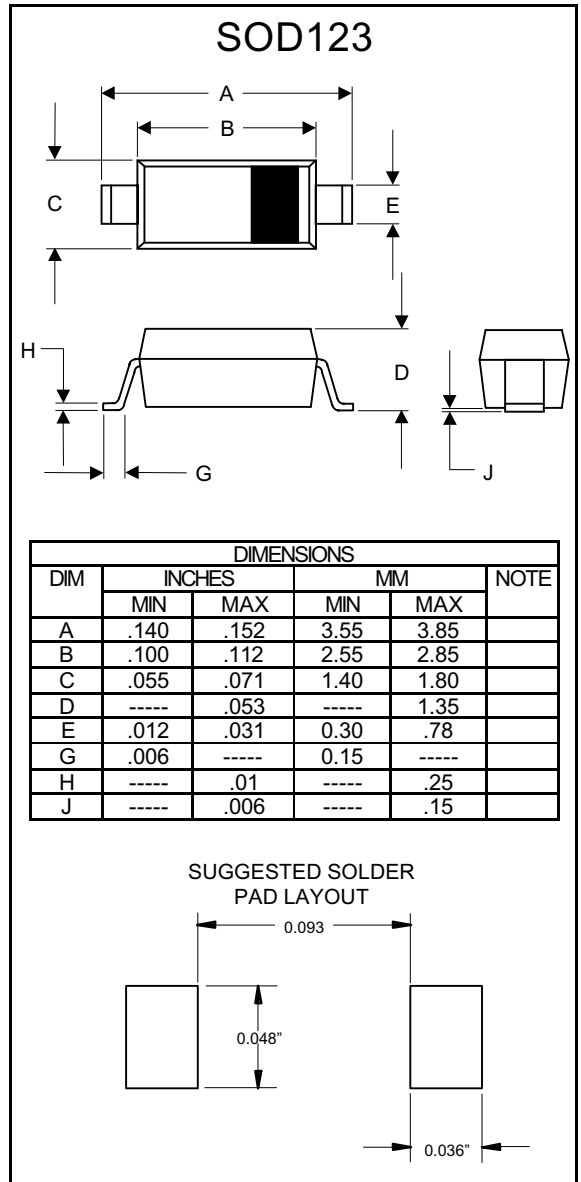
	Symbol	Value	Units
Max. Steady State Power Dissipation at $T_L < 75^\circ\text{C}$ , Lead Length = 3/8"	$P_D$	500	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to 150	$^\circ\text{C}$
Thermal Resistance( Junction to Ambient)	$R_{thJA}$	340	K/W

### Electrical Characteristics @ 25°C Unless Otherwise Specified

	Symbol	Maximum	Unit
Max. Forward Voltage @ $I_F = 10\text{mA}$	$V_F$	0.9	V

#### NOTE:

- 1) Some part number series have lower JEDEC registered ratings.



# MMSZ4685 thru MMSZ4701

**Electrical Characteristics ( $T_i = 30^\circ\text{C}$  Unless Otherwise Noted,  $V_F = 0.95\text{V}$  Max @  $I_F = 10\text{mA}$  for all types)**

Device	Zener Voltage				Leakage Current		Device Marking
	$V_Z$ (Volts)			@ $I_{ZT}$	$I_R$ @ $V_R$		
	Min	Nom	Max	$\mu\text{A}$	$\mu\text{A}$	Volts	
MMSZ4685	3.42	3.6	3.78	50	7.5	2.0	CM
MMSZ4686	3.70	3.9	4.10	50	5.0	2.0	CN
MMSZ4689	4.85	5.1	5.36	50	10	3.0	CU
MMSZ4692	6.46	6.8	7.14	50	10	5.1	CX
MMSZ4693	7.13	7.5	7.88	50	10	5.7	CY
MMSZ4701	13.30	14	14.7	50	0.05	10.6	DK

TYPICAL CHARACTERISTICS

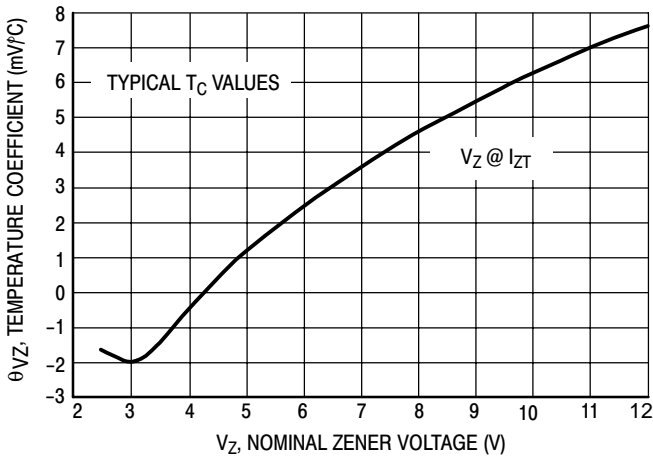


Figure 1. Temperature Coefficients (Temperature Range -55°C to +150°C)

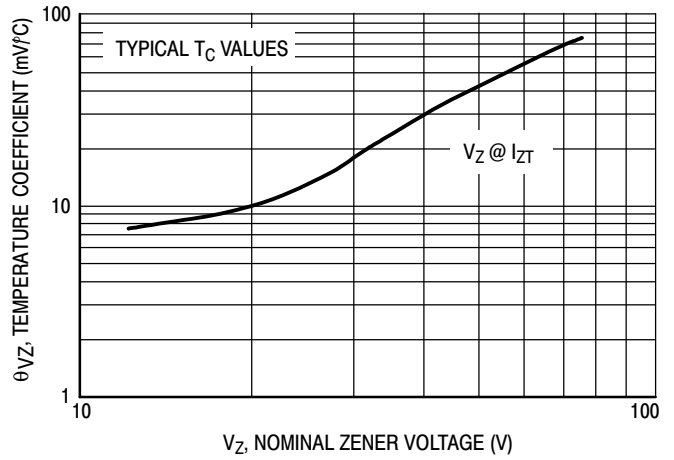


Figure 2. Temperature Coefficients (Temperature Range -55°C to +150°C)

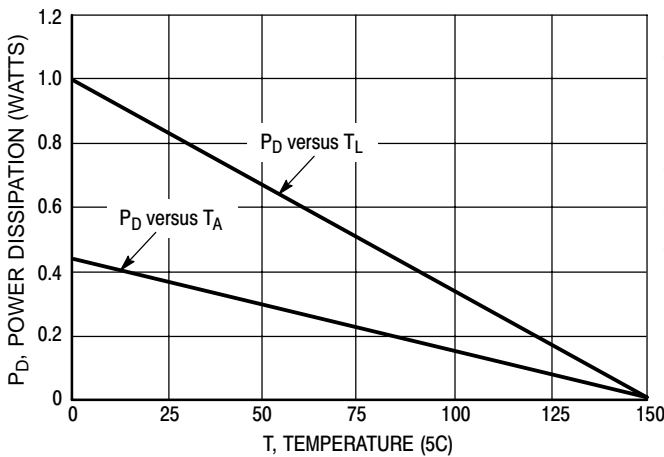


Figure 3. Steady State Power Derating

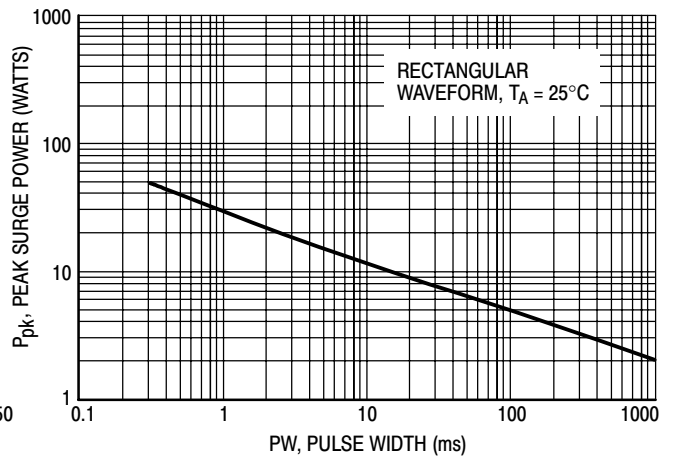


Figure 4. Maximum Nonrepetitive Surge Power

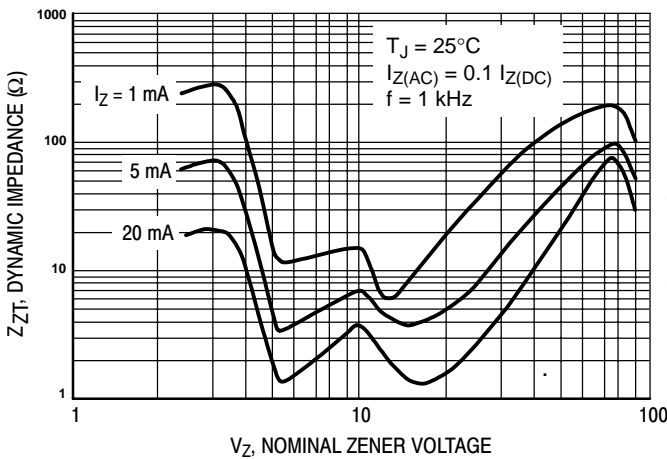


Figure 5. Effect of Zener Voltage on Zener Impedance

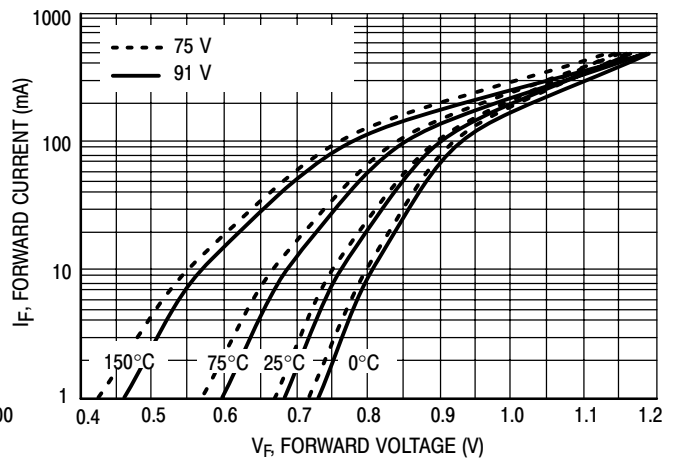


Figure 6. Typical Forward Voltage

TYPICAL CHARACTERISTICS

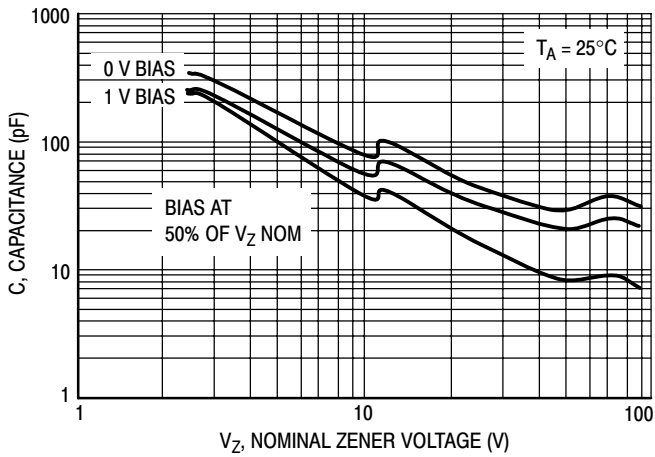


Figure 7. Typical Capacitance

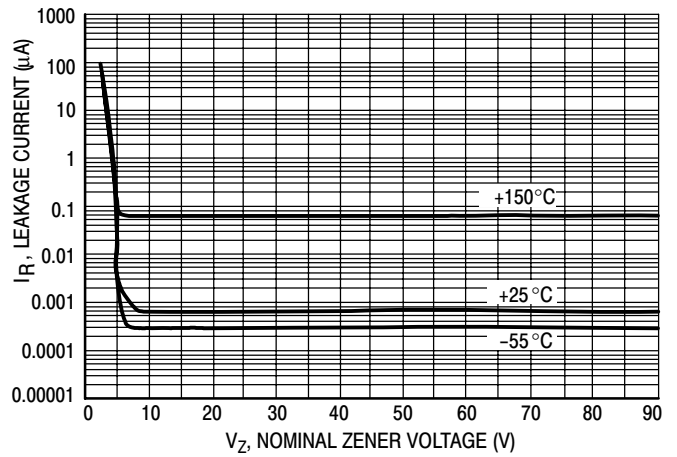


Figure 8. Typical Leakage Current

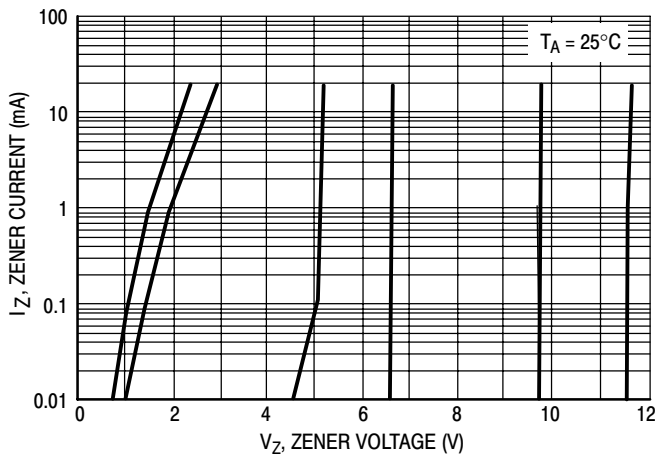


Figure 9. Zener Voltage versus Zener Current (V<sub>Z</sub> Up to 12 V)

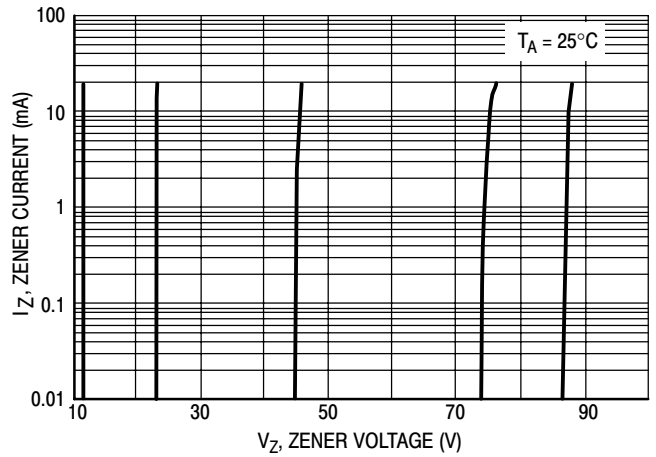


Figure 10. Zener Voltage versus Zener Current (12 V to 91 V)



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## Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;3Kpcs/Reel

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