

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

### FEATURES

- Large Selection of Zener Voltage: 1.8V~43V
- Tight Voltage Tolerance:  $\pm 5\%$
- Ultra-low Profile Package Well Suited for Automated Assembly
- MSL Class 1 Compatible

### MECHANICAL DATA

- Case: SOD-323, Plastic
- Case Material-UL Flammability Rating Classification 94V-0
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band

### APPLICATIONS

- General Voltage Regulating
- Mobile & Handheld Systems

### PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-323	3K	7 inch

### ORDER INFORMATION

Part Number	Type
MMSZ46xxS-C	Lead (Pb)-free and Halogen-free

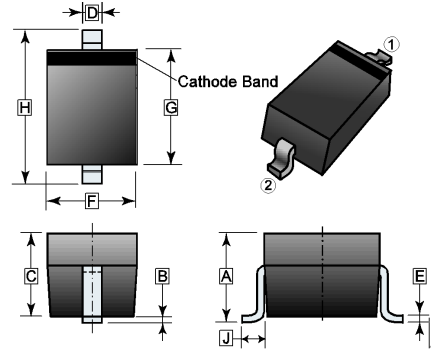
### MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Forward Voltage @ I <sub>F</sub> =10mA	V <sub>F</sub>	0.9	V
Power Dissipation	P <sub>D</sub>	200	mW
Thermal Resistance from Junction-Ambient	R <sub>θJA</sub>	625	°C/W
Thermal Resistance from Junction-Case	R <sub>θJC</sub>	337	
Operating Junction Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-65~150	

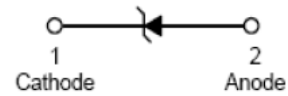
Note:

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

### SOD-323



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.05 REF.		F	1.15	1.45
B	0.20 REF.		G	1.60	1.80
C	0.80	1.00	H	2.30	2.75
D	0.25	0.40	J	0.475 REF.	
E	0.05	0.18			



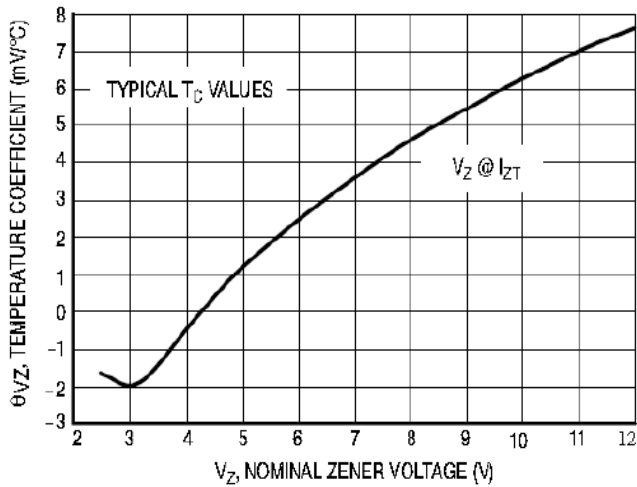
**ELECTRICAL RATINGS** ( $T_A=25^\circ\text{C}$  unless otherwise specified)

Part Number	Marking	Zener Voltage Range				Maximum Reverse Leakage Current	
		$V_Z @ I_{ZT}$			$I_{ZT}$	$I_R @ V_R$	
		Min. (V)	Nom. (V)	Max. (V)	$\mu\text{A}$	$\mu\text{A}$	V
MMSZ4678S-C	CC	1.71	1.8	1.89	50	7.5	1
MMSZ4679S-C	CD	1.9	2	2.1	50	5	1
MMSZ4680S-C	CE	2.09	2.2	2.31	50	4	1
MMSZ4681S-C	CF	2.28	2.4	2.52	50	2	1
MMSZ4682S-C	CH	2.57	2.7	2.84	50	1	1
MMSZ4683S-C	CJ	2.85	3	3.15	50	0.8	1
MMSZ4684S-C	CK	3.14	3.3	3.47	50	7.5	1.5
MMSZ4685S-C	CM	3.42	3.6	3.78	50	7.5	2
MMSZ4686S-C	CN	3.71	3.9	4.1	50	5	2
MMSZ4687S-C	CP	4.09	4.3	4.52	50	4	2
MMSZ4688S-C	CT	4.47	4.7	4.94	50	10	3
MMSZ4689S-C	CU	4.85	5.1	5.36	50	10	3
MMSZ4690S-C	CV	5.32	5.6	5.88	50	10	4
MMSZ4691S-C	CA	5.89	6.2	6.51	50	10	5
MMSZ4692S-C	CX	6.46	6.8	7.14	50	10	5.1
MMSZ4693S-C	CY	7.13	7.5	7.88	50	10	5.7
MMSZ4694S-C	CZ	7.79	8.2	8.61	50	1	6.2
MMSZ4695S-C	DC	8.27	8.7	9.14	50	1	6.6
MMSZ4696S-C	DD	8.65	9.1	9.56	50	1	6.9
MMSZ4697S-C	DE	9.5	10	10.5	50	1	7.6
MMSZ4698S-C	DF	10.45	11	11.55	50	0.05	8.4
MMSZ4699S-C	DH	11.4	12	12.6	50	0.05	9.1
MMSZ4700S-C	DJ	12.35	13	13.65	50	0.05	9.8
MMSZ4701S-C	DK	13.3	14	14.7	50	0.05	10.6
MMSZ4702S-C	DM	14.25	15	15.75	50	0.05	11.4
MMSZ4703S-C	DN	15.2	16	16.8	50	0.05	12.1
MMSZ4704S-C	DP	16.15	17	17.85	50	0.05	12.9
MMSZ4705S-C	DT	17.1	18	18.9	50	0.05	13.6
MMSZ4706S-C	DU	18.05	19	19.95	50	0.05	14.4
MMSZ4707S-C	DV	19	20	21	50	0.01	15.2

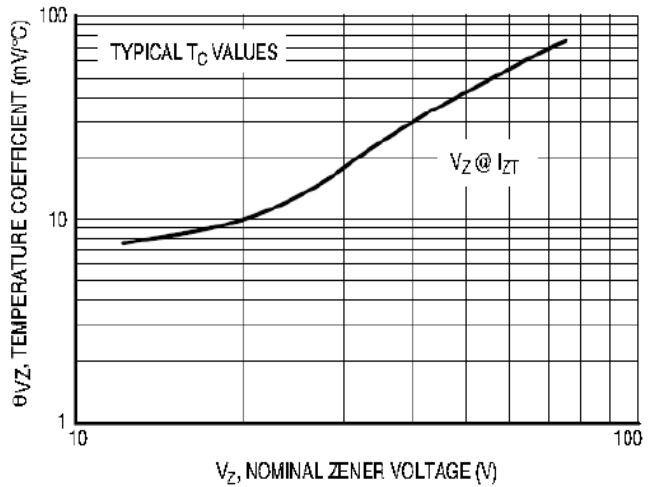
**ELECTRICAL RATINGS** ( $T_A=25^\circ\text{C}$  unless otherwise specified)

Part Number	Marking	Zener Voltage Range				Maximum Reverse Leakage Current	
		$V_Z @ I_{ZT}$			$I_{ZT}$	$I_R @ V_R$	
		Min. (V)	Nom. (V)	Max. (V)	$\mu\text{A}$	$\mu\text{A}$	V
MMSZ4708S-C	DA	20.9	22	23.1	50	0.01	16.7
MMSZ4709S-C	DX	22.8	24	25.2	50	0.01	18.2
MMSZ4710S-C	DY	23.75	25	26.25	50	0.01	19
MMSZ4711S-C	EA	25.65	27	28.35	50	0.01	20.4
MMSZ4712S-C	EC	26.6	28	29.4	50	0.01	21.2
MMSZ4713S-C	ED	28.5	30	31.5	50	0.01	22.8
MMSZ4714S-C	EE	31.35	33	34.65	50	0.01	25
MMSZ4715S-C	EF	34.2	36	37.8	50	0.01	27.3
MMSZ4716S-C	EH	37.05	39	40.95	50	0.01	29.6
MMSZ4717S-C	EJ	40.85	43	45.15	50	0.01	32.6

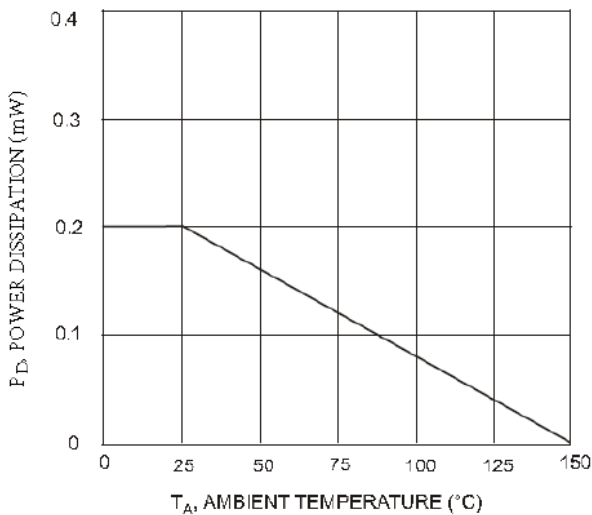
**CHARACTERISTIC CURVES**



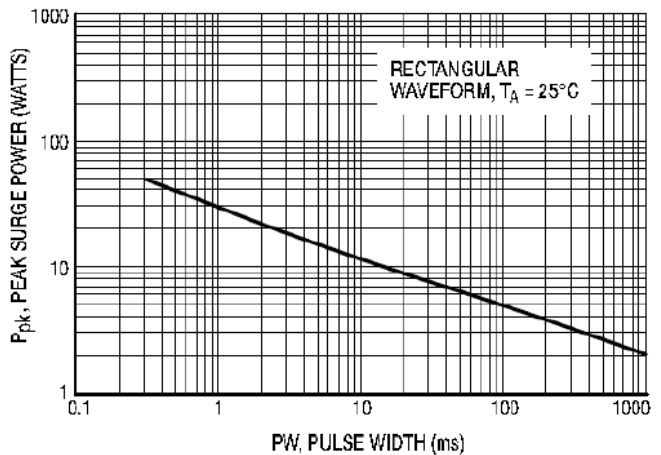
**Figure 1 Temperature Coefficients  
(Temperature Range -55°C to +150°C)**



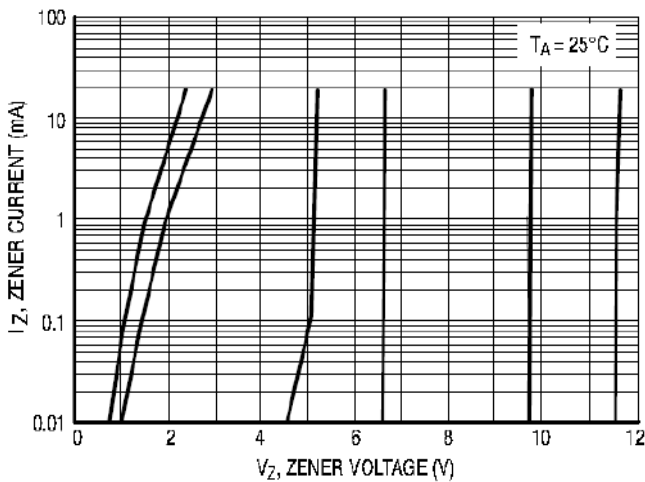
**Figure 2 Temperature Coefficients  
(Temperature Range -55°C to +150°C)**



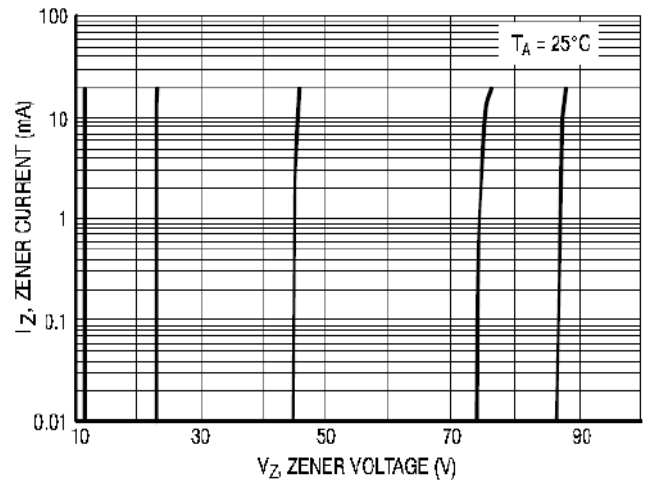
**Figure 3 Steady State Power Derating**



**Figure 4 Maximum Nonrepetitive Surge Power**



**Figure 5 Zener Voltage versus Zener Current  
(Vz Up to 12 V)**



**Figure 6 Zener Voltage versus Zener Current  
(12 V to 91 V)**