

A suffix of "-C" specifies halogen & RoHS compliant

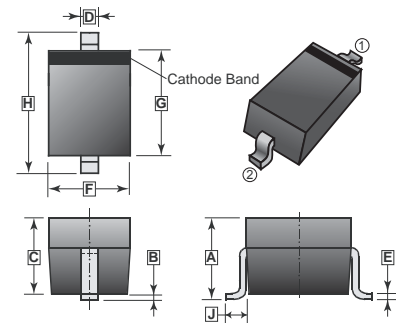
## FEATURES

- RoHS Compliant
- Standard Zener Breakdown Voltage Range 3.0V to 39V
- Steady State Power Rating of 200 mW
- Small Body Outline Dimensions: 1.7 mm x 1.25 mm
- Low Body Height: 0.9 mm
- Package Weight: 4.507 mg/unit
- ESD Rating of Class 3 (>16 KV) per Human Body Model

## MECHANICAL DATA

- Case: SOD-323, Void-free, Transfer-Molded plastic
- Finish: All external surfaces are corrosion resistant
- Maximum Case Temperature For Soldering Purposes: 260°C for 10 seconds
- Polarity: Cathode indicated by polarity band
- Flammability Rating: UL94 V-0
- Mounting Position: Any

### SOD - 323



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.05	REF.	E	0.080	0.180
B	0.20	REF.	F	1.15	1.45
C	0.80	1.00	G	1.60	1.80
D	0.25	0.40	H	2.30	2.70

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Maximum Ratings @  $T_A = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	VALUE	UNITS
Power Dissipation (NOTE 1) Derate above 25°C	$P_d$	200 1.5	mW mW / °C
Forward Voltage (NOTE 2) @ $I_F = 10$ mA	$V_F$	0.9	V
Thermal Resistance from Junction to Ambient (NOTE 1)	$R_{\theta JA}$	625	°C / W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	°C

Notes:

1. Valid provided that device terminals are kept at ambient temperature..
2. Short duration test pulse used in minimize self-heating effect
3.  $f = 1$  K Hz

**TYPICAL CHARACTERISTICS**

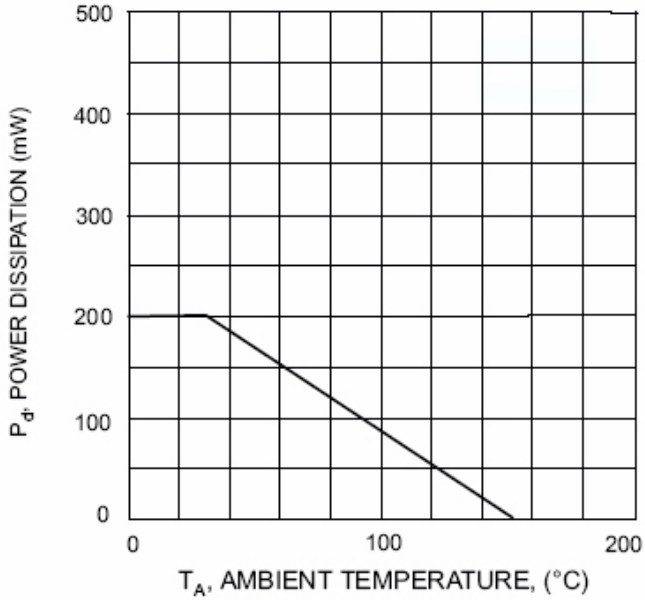


Fig. 1 Power Derating Curve

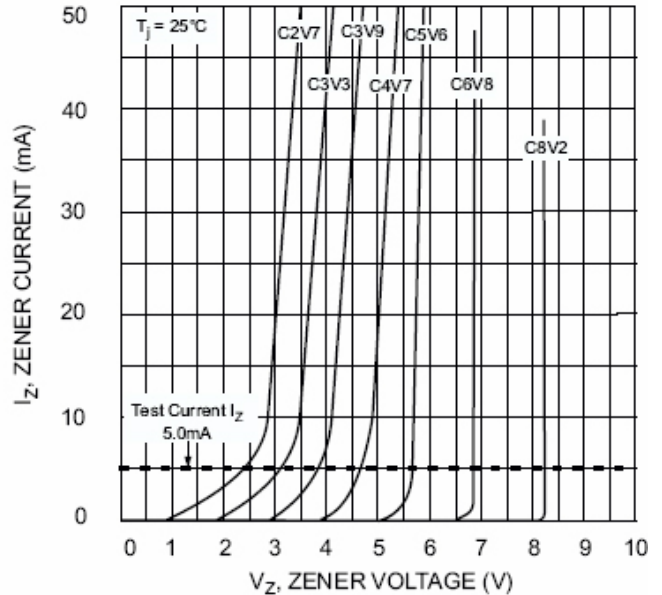


Fig. 2 Zener Breakdown Characteristics

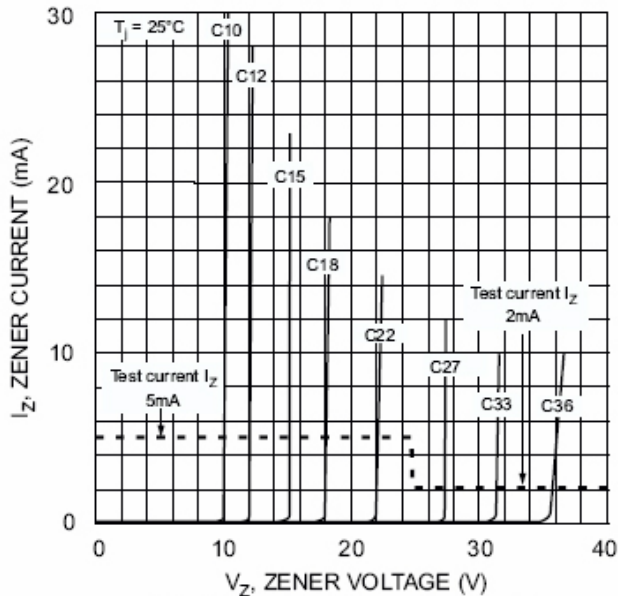


Fig. 3 Zener Breakdown Characteristics

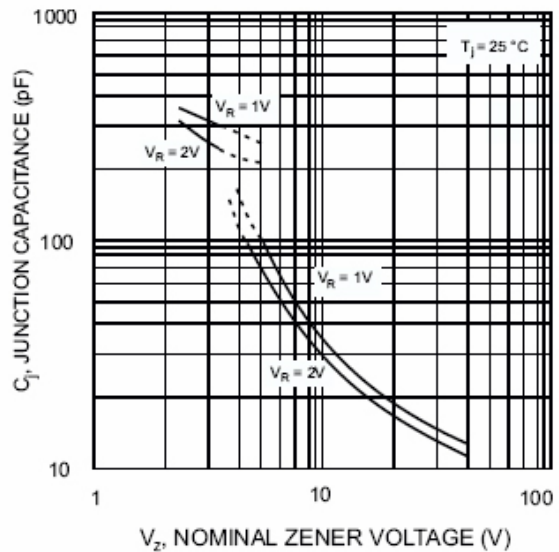


Fig. 4 Junction Capacitance vs Nominal Zener Voltage

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

TYPE NUMBER	MARKING CODE	ZENER VOLTAGE RANGE (Note 2)				MAXIMUM ZENER IMPEDANCE (Note 3)			MAXIMUM REVERSE CURRENT (Note 2)		TEMPERATURE COEFFICIENT OF ZENER VOLTAGE @ $I_{ZT} = 5 \text{ mA}$	
		$V_Z$			$I_{ZT}$	$Z_{ZT}@I_{ZT}$	$Z_{ZK}@I_{ZK}$	$I_R @ V_R$		Min	Max	
		Min V	Nom V	Max V				$\mu\text{A}$	V			mV / $^\circ\text{C}$
MM3Z3V0	02,W2	2.8	3.0	3.2	5	95	600	1	10	1	-3.5	0
MM3Z3V3	05,W3	3.1	3.3	3.5	5	95	600	1	5	1	-3.5	0
MM3Z3V6	06,W4	3.4	3.6	3.8	5	90	600	1	5	1	-3.5	0
MM3Z3V9	07,W5	3.7	3.9	4.1	5	90	600	1	3	1	-3.5	0
MM3Z4V3	08,W6	4.0	4.3	4.6	5	90	600	1	3	1	-3.5	0
MM3Z4V7	09,W7	4.4	4.7	5.0	5	80	500	1	3	2	-3.5	0.2
MM3Z5V1	0A,W8	4.8	5.1	5.4	5	60	480	1	2	2	-2.7	1.2
MM3Z5V6	0C,W9	5.2	5.6	6.0	5	40	400	1	1	2	-2	2.5
MM3Z6V2	0E,WA	5.8	6.2	6.6	5	10	150	1	3	4	0.4	3.7
MM3Z6V8	0F,WB	6.4	6.8	7.2	5	15	80	1	2	4	1.2	4.5
MM3Z7V5	0G,WC	7.0	7.5	7.9	5	15	80	1	1	5	2.5	5.3
MM3Z8V2	0H,WD	7.7	8.2	8.7	5	15	80	1	0.7	5	3.2	6.2
MM3Z9V1	0K,WE	8.5	9.1	9.6	5	15	100	1	0.5	6	3.8	7
MM3Z10V	0L,WF	9.4	10	10.6	5	20	150	1	0.2	7	4.5	8
MM3Z11V	0M,WG	10.4	11	11.6	5	20	150	1	0.1	8	5.4	9
MM3Z12V	0N,WH	11.4	12	12.7	5	25	150	1	0.1	8	6	10
MM3Z13V	0P,WI	12.4	13	14.1	5	30	170	1	0.1	8	7	11
MM3Z15V	0T,WJ	13.8	15	15.6	5	30	200	1	0.1	10.5	9.2	13
MM3Z16V	0U,WK	15.3	16	17.1	5	40	200	1	0.1	11.2	10.4	14
MM3Z18V	0W,WL	16.8	18	19.1	5	45	225	1	0.1	12.6	12.4	16
MM3Z20V	0Z,WM	18.8	20	21.2	5	55	225	1	0.1	14.0	14.4	18
MM3Z22V	10,WN	20.8	22	23.3	5	55	250	1	0.1	15.4	16.4	20
MM3Z24V	11,WO	22.8	24	25.6	5	70	250	1	0.1	16.8	18.4	22
MM3Z27V	12,WP	25.1	27	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3
MM3Z30V	14,WQ	28	30	32	2	80	300	0.5	0.1	21.0	24.4	29.4
MM3Z33V	18,WR	31	33	35	2	80	325	0.5	0.1	23.1	27.4	33.4
MM3Z36V	19,WS	34	36	38	2	90	350	0.5	0.1	25.2	30.4	37.4
MM3Z39V	20,WT	37	39	41	2	130	350	0.5	0.1	27.3	33.4	41.2

Notes:

1. Valid provided that device terminals are kept at ambient temperature..
2. Test with pulses. Period = 5 ms, pulse width = 300  $\mu\text{s}$
3.  $f = 1 \text{ K Hz}$