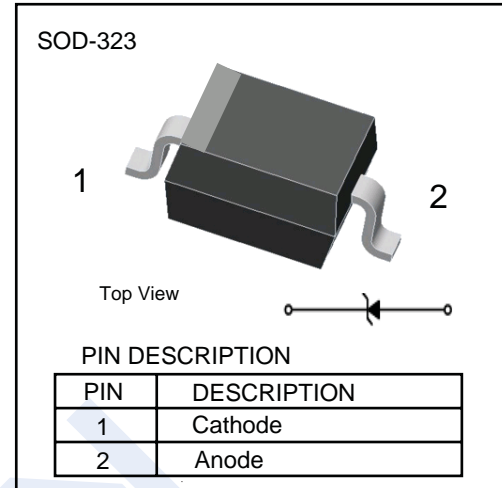


Zener Diodes

1KZ1F2V4C ~ 1KZ1F51C

■ Features

- 200mW Power Dissipation
- 2.4 – 51V Nominal Zener Voltage
- Designed for Surface Mount Application
- Planar Die Construction

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Forward Voltage @ $I_F = 10\text{mA}$	V_F	0.9	V
Power Dissipation (Note.1)	P_d	200	mW
Thermal Resistance Junction to Ambient (Note.1)	$R_{\theta JA}$	625	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature range	T_{stg}	-65 to 150	

Note.1: Valid provided that device terminals are kept at ambient temperature.

Zener Diodes

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■ Electrical Characteristics Ta = 25°C

Type Number (Note 1)	Device Marking Code	Zener Voltage Range (Note 2)			Maximum Zener Impedance (Note 3)				Max Reverse Leakage Current		Temp. Coefficient of Zener Voltage @ I _{ZT} mV / °C	
		V _Z @ I _{ZT}			Z _T @ I _{ZT}		Z _{ZK} @ I _{ZK}		I _R	@ V _R	Min	Max
		Nom (V)	Min (V)	Max (V)	(Ω)	(mA)	(Ω)	(mA)	(μA)	(V)		
1KZ1F2V4C	Z0	2.4	2.28	2.52	85	5.0	600	1.0	100	1.0	-3.5	0
1KZ1F2V7C	Z1	2.7	2.57	2.84	83	5.0	600	1.0	75	1.0	-3.5	0
1KZ1F3V0C	Z2	3.0	2.85	3.15	95	5.0	600	1.0	50	1.0	-3.5	0
1KZ1F3V3C	Z3	3.3	3.14	3.47	95	5.0	600	1.0	25	1.0	-3.5	0
1KZ1F3V6C	Z4	3.6	3.42	3.78	95	5.0	600	1.0	15	1.0	-3.5	0
1KZ1F3V9C	Z5	3.9	3.71	4.10	95	5.0	600	1.0	10	1.0	-3.5	0
1KZ1F4V3C	Z6	4.3	4.09	4.52	95	5.0	600	1.0	5.0	1.0	-3.5	0
1KZ1F4V7C	Z7	4.7	4.47	4.94	78	5.0	500	1.0	5.0	1.0	-3.5	0.2
1KZ1F5V1C	Z8	5.1	4.85	5.36	60	5.0	480	1.0	0.1	0.8	-2.7	1.2
1KZ1F5V6C	Z9	5.6	5.32	5.88	40	5.0	400	1.0	0.1	1.0	-2.0	2.5
1KZ1F6V2C	ZA	6.2	5.89	6.51	10	5.0	150	1.0	0.1	2.0	0.4	3.7
1KZ1F6V8C	ZB	6.8	6.46	7.14	8.0	5.0	80	1.0	0.1	3.0	1.2	4.5
1KZ1F7V5C	ZC	7.5	7.13	7.88	7.0	5.0	80	1.0	0.1	5.0	2.5	5.3
1KZ1F8V2C	ZD	8.2	7.79	8.61	7.0	5.0	80	1.0	0.1	6.0	3.2	6.2
1KZ1F9V1C	ZE	9.1	8.65	9.56	10	5.0	100	1.0	0.1	7.0	3.8	7.0
1KZ1F10C	ZF	10	9.50	10.50	15	5.0	150	1.0	0.1	7.5	4.5	8.0
1KZ1F11C	ZG	11	10.45	11.55	20	5.0	150	1.0	0.1	8.5	5.4	9.0
1KZ1F12C	ZH	12	11.40	12.60	20	5.0	150	1.0	0.1	9.0	6.0	10
1KZ1F13C	ZJ	13	12.35	13.65	25	5.0	170	1.0	0.1	10	7.0	11
1KZ1F15C	ZK	15	14.25	15.75	30	5.0	200	1.0	0.1	11	9.2	13
1KZ1F16C	ZL	16	15.20	16.80	40	5.0	200	1.0	0.1	12	10.4	14
1KZ1F18C	ZM	18	17.10	18.90	50	5.0	225	1.0	0.1	14	12.4	16
1KZ1F20C	ZN	20	19.00	21.00	50	5.0	225	1.0	0.1	15	14.4	18
1KZ1F22C	ZP	22	20.90	23.10	55	5.0	250	1.0	0.1	17	16.4	20
1KZ1F24C	ZR	24	22.80	25.20	80	5.0	250	1.0	0.1	18	18.4	22
1KZ1F27C	ZS	27	25.65	28.35	80	5.0	300	1.0	0.1	20	21.4	25.3
1KZ1F30C	ZT	30	28.50	31.50	80	5.0	300	1.0	0.1	22.5	24.4	29.4
1KZ1F33C	ZU	33	31.35	34.65	80	5.0	325	1.0	0.1	25	27.4	33.4
1KZ1F36C	ZV	36	34.20	37.80	90	5.0	350	1.0	0.1	27	30.4	37.4
1KZ1F39C	ZW	39	37.05	40.95	90	5.0	350	1.0	0.1	29	33.4	41.2
1KZ1F43C	ZX	43	40.85	45.15	100	5.0	700	1.0	0.1	32	10.0	12
1KZ1F47C	ZY	47	44.65	49.35	100	5.0	750	1.0	0.1	35	10.0	12
1KZ1F51C	Z-	51	48.45	53.55	100	5.0	750	1.0	0.1	38	10.0	12

Note: 1. Type numbers listed have standard tolerance on the nominal zener voltage of ±5%.

2. Measured with pulses t_p = 5ms.

3. f = 1KHz

Zener Diodes

1KZ1F2V4C ~ 1KZ1F51C

■ Typical Characteristics

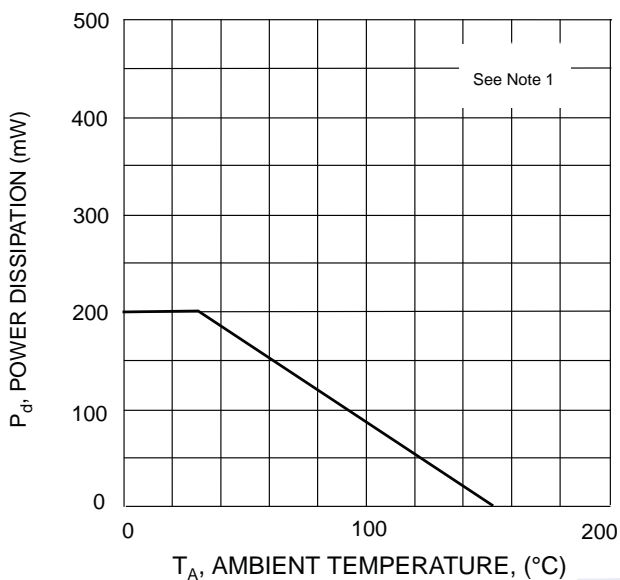


Fig. 1 Power Derating Curve

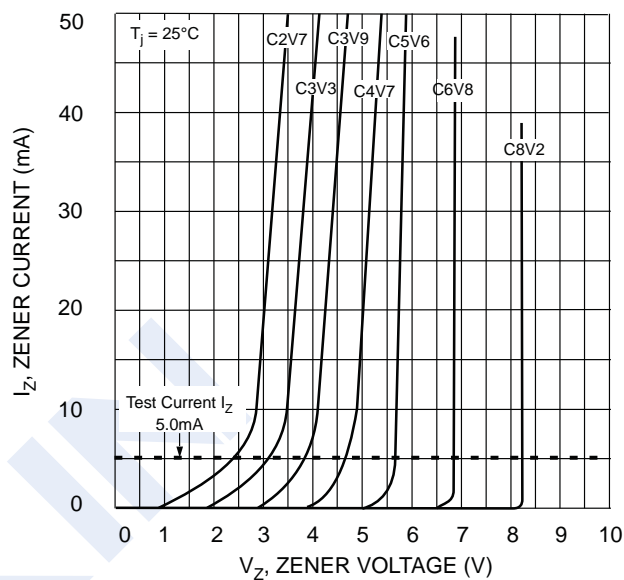


Fig. 2 Zener Breakdown Characteristics

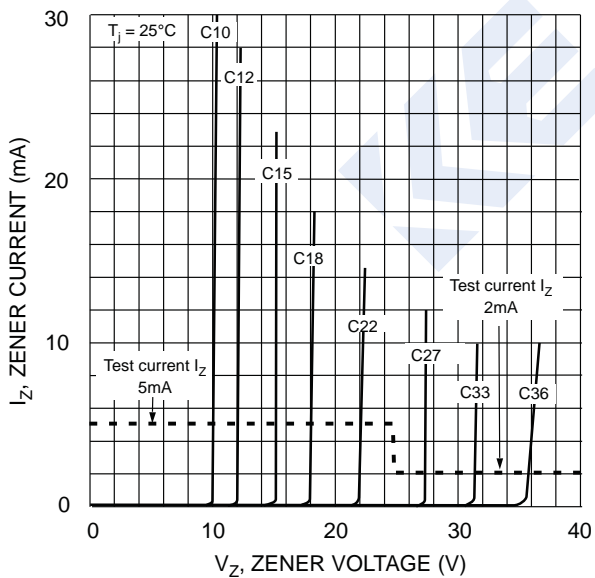


Fig. 3 Zener Breakdown Characteristics

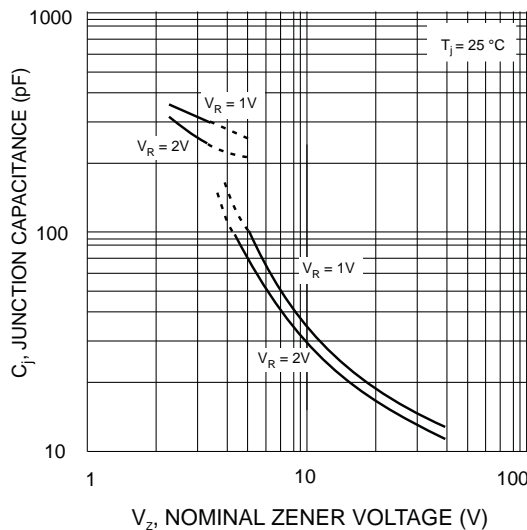


Fig. 4 Junction Capacitance vs Nominal Zener Voltage

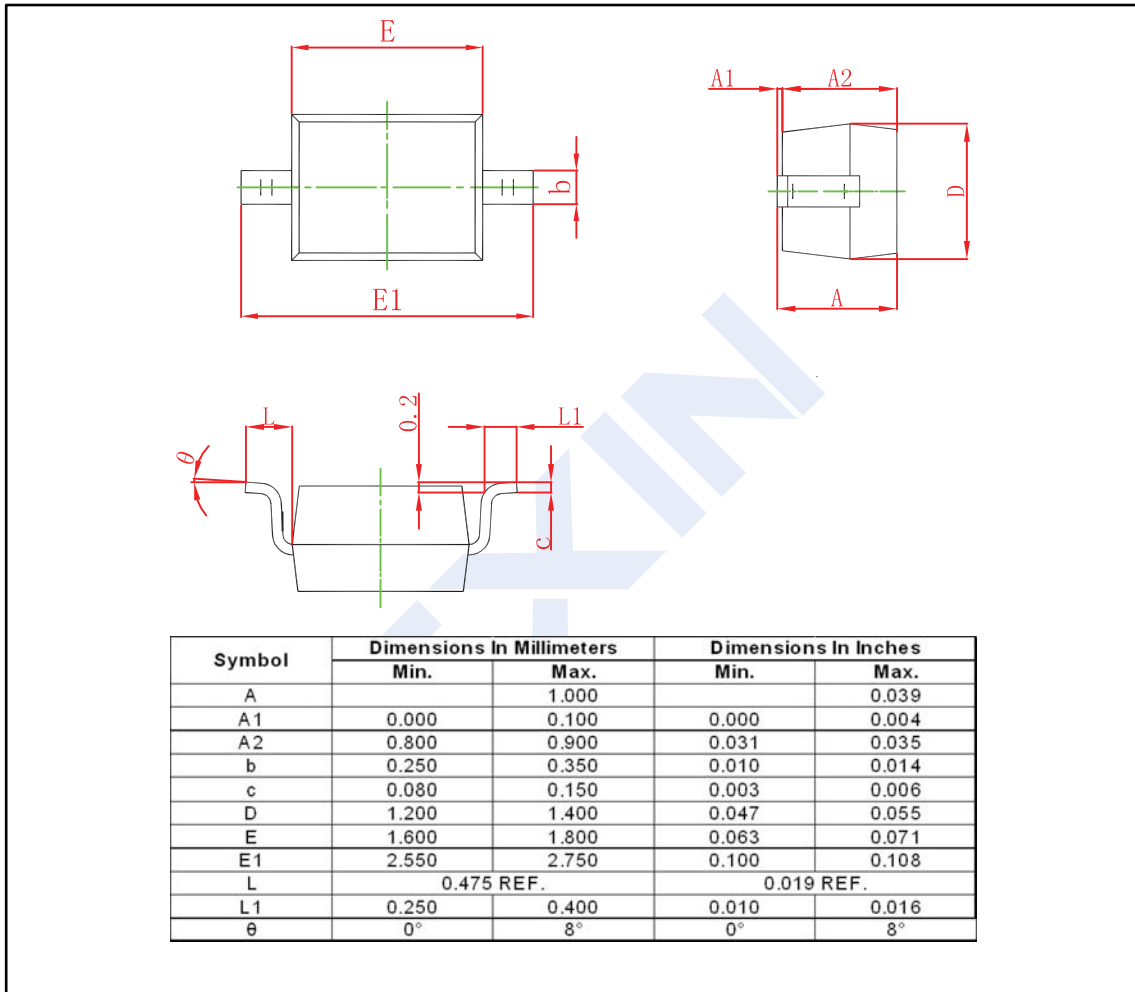
Zener Diodes

1KZ1F2V4C ~ 1KZ1F51C

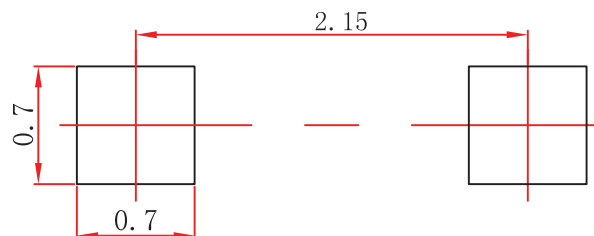
■ Package Outline Dimensions

Plastic surface mounted package; 2 leads

SOD-323



■ The Recommended Mounting Pad Size

**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.