

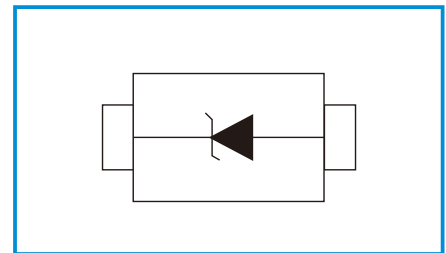
Zener Diode

Features

- Planar Die Construction
- 200mW Power Dissipation
- Zener Voltages From 2.4 – 75V

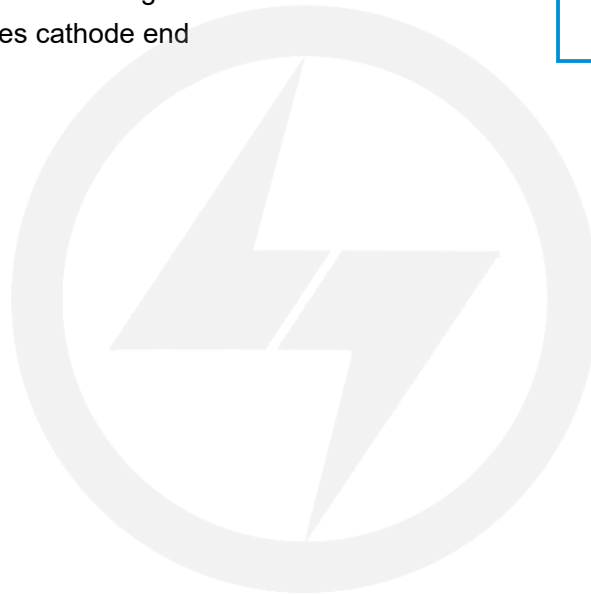


Functional Diagram



Mechanical Data

- SOD-523 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Epoxy UL: 94V 0



Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameters	Symbol	Value	Unit
Forward Voltage @IF=10mA	V _F	0.9	V
Power Dissipation (Note 1)	P _d	200	mW
Junction temperature	T _j	-65-+150	°C
Storage temperature range	T _{STG}	-65-+150	°C

Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified).

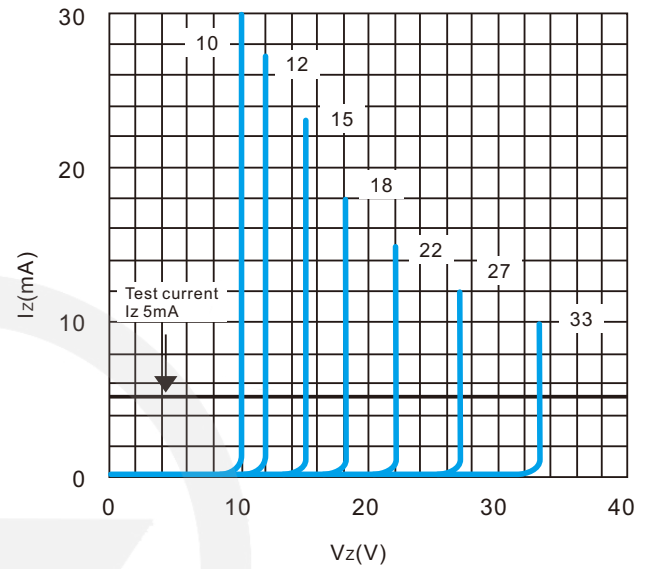
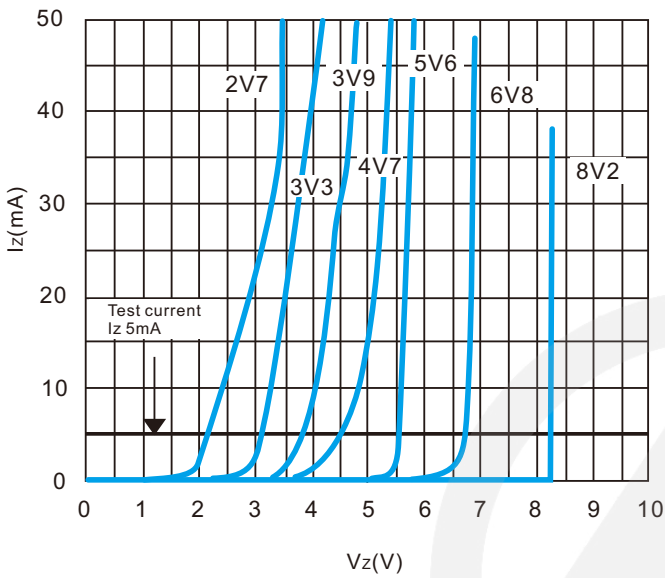
Device	Device Marking	Zener Voltage (Note 1)				Zener Impedance			Leakage Current		©V _Z (mV/k) @ I _{ZT}		C @ V _R = 0 f = 1 MHz
		V _Z (Volts)			@ I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}		I _R @ V _R		Min	Max	pF
		Min	Nom	Max	mA			mA	μA	Volts			
LT5Z2V4	00	2.2	2.4	2.6	5	100	1000	1.0	50	1.0	-3.5	0	450
LT5Z2V7	01	2.5	2.7	2.9	5	100	1000	1.0	20	1.0	-3.5	0	450
LT5Z3V0	02	2.8	3.0	3.2	5	100	1000	1.0	10	1.0	-3.5	0	450
LT5Z3V3	05	3.1	3.3	3.5	5	95	1000	1.0	5	1.0	-3.5	0	450
LT5Z3V6	06	3.4	3.6	3.8	5	90	1000	1.0	5	1.0	-3.5	0	450
LT5Z3V9	07	3.7	3.9	4.1	5	90	1000	1.0	3	1.0	-3.5	-2.5	450
LT5Z4V3	08	4.0	4.3	4.6	5	90	1000	1.0	3	1.0	-3.5	0	450
LT5Z4V7	09	4.4	4.7	5.0	5	80	800	1.0	3	2.0	-3.5	0.2	260
LT5Z5V1	0A	4.8	5.1	5.4	5	60	500	1.0	2	2.0	-2.7	1.2	225
LT5Z5V6	0C	5.2	5.6	6.0	5	40	200	1.0	1	2.0	-2.0	2.5	200
LT5Z6V2	0E	5.8	6.2	6.6	5	10	100	1.0	3	4.0	0.4	3.7	185
LT5Z6V8	0F	6.4	6.8	7.2	5	15	160	1.0	2	4.0	1.2	4.5	155
LT5Z7V5	0G	7.0	7.5	7.9	5	15	160	1.0	1	5.0	2.5	5.3	140
LT5Z8V2	0H	7.7	8.2	8.7	5	15	160	1.0	0.7	5.0	3.2	6.2	135
LT5Z9V1	0K	8.5	9.1	9.6	5	15	160	1.0	0.2	7.0	3.8	7.0	130
LT5Z10	0L	9.4	10	10.6	5	20	160	1.0	0.1	8.0	4.5	8.0	130
LT5Z11	0M	10.4	11	11.6	5	20	160	1.0	0.1	8.0	5.4	9.0	130
LT5Z12	0N	11.4	12	12.7	5	25	80	1.0	0.1	8.0	6.0	10	130
LT5Z13	0P	12.4	13.25	14.1	5	30	80	1.0	0.1	8.0	7.0	11	120
LT5Z15	0T	14.3	15	15.8	5	30	80	1.0	0.05	10.5	9.2	13	110
LT5Z16	0U	15.3	16.2	17.1	2	40	80	1.0	0.05	11.2	10.4	14	105
LT5Z18	0W	16.8	18	19.1	2	45	80	1.0	0.05	12.6	12.4	16	100
LT5Z20	0Z	18.8	20	21.2	2	55	100	1.0	0.05	14.0	14.4	18	85
LT5Z22	10	20.8	22	23.3	2	55	100	1.0	0.05	15.4	16.4	20	85
LT5Z24	11	22.8	24.2	25.6	2	70	120	1.0	0.05	16.8	18.4	22	80
LT5Z27	12	25.1	27	28.9	2	80	300	1.0	0.05	18.9	21.4	25.3	70
LT5Z30	14	28	30	32	2	80	300	1.0	0.05	21.0	24.4	29.4	70
LT5Z33	18	31	33	35	2	80	300	1.0	0.05	23.2	27.4	33.4	70
LT5Z36	19	34	36	38	2	90	500	1.0	0.05	25.2	30.4	37.4	70
LT5Z39	20	37	39	41	2	130	500	1.0	0.05	27.3	33.4	41.2	45
LT5Z43	21	40	43	46	1	150	500	1.0	0.05	30.1	37.6	46.6	40
LT5Z47	1A	44	47	50	1	170	500	1.0	0.05	32.9	42.0	51.8	40
LT5Z51	1C	48	51	54	1	180	500	1.0	0.05	35.7	46.6	57.2	40
LT5Z56	1D	52	56	60	1	200	500	1.0	0.05	39.2	52.2	63.8	40
LT5Z62	1E	58	62	66	1	215	500	1.0	0.05	43.4	58.8	71.6	35
LT5Z68	1F	64	68	72	1	240	500	1.0	0.05	47.6	65.6	79.8	35
LT5Z75	1G	70	75	79	1	255	500	1.0	0.05	52.5	73.4	88.6	35

Notes:

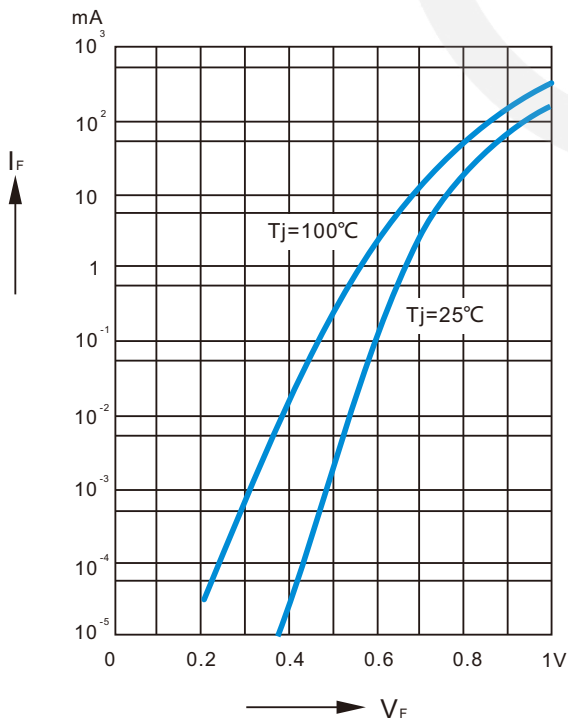
1. Valid provided that device terminals are kept at ambient temperature.

Characteristic Curves

breakdown characteristics
at $T_j = \text{constant}$ (pulsed)

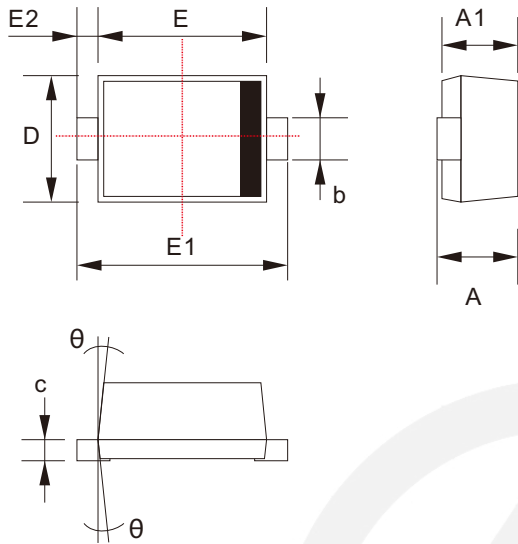


Forward characteristics



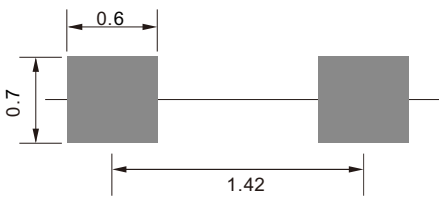
SOD-523 PACKAGE OUTLINE Plastic surface mounted package

Unit: mm

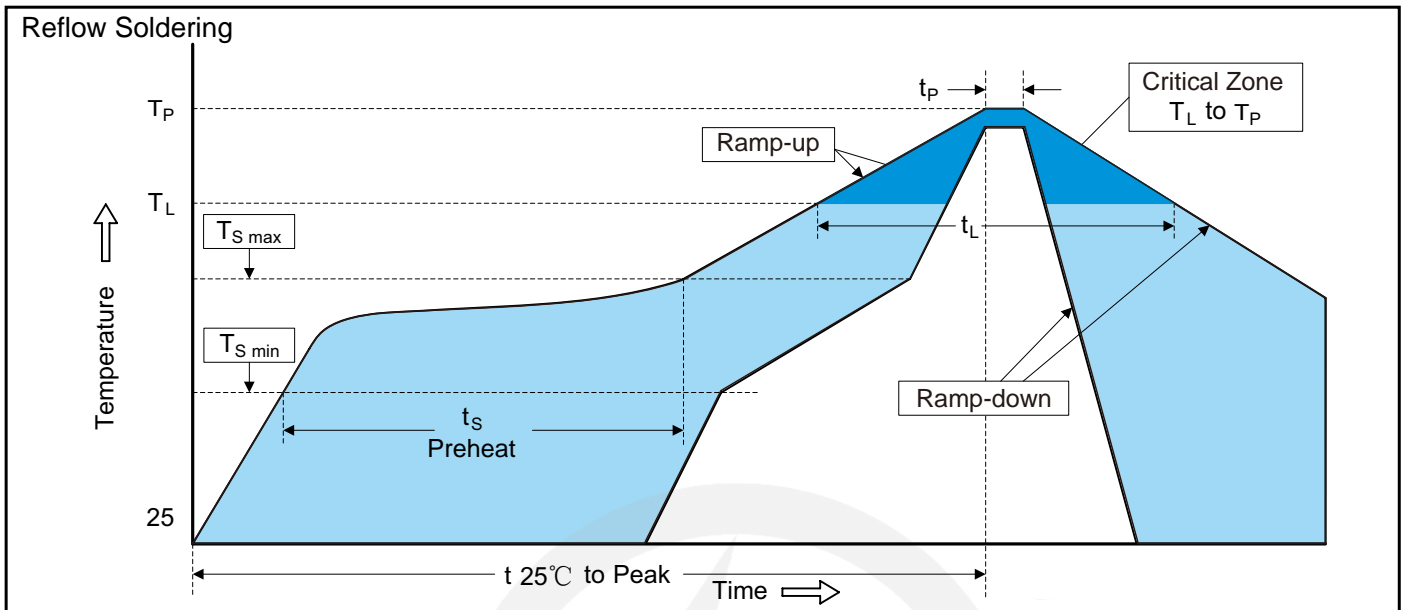


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.500	0.770
A1	0.500	0.700
b	0.250	0.380
c	0.070	0.200
D	0.700	0.900
E	1.100	1.300
E1	1.500	1.700
E2	0.200 REF	
θ	7° REF	

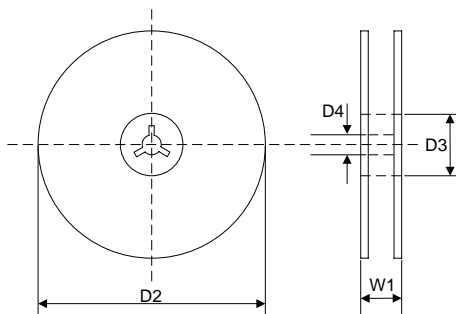
Recommended Solder Pad Footprint



- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: ± 0.05 mm.
 3. The pad layout is for reference purposes only.

Recommended Soldering Conditions

Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_s)	150°C 200°C 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	217°C 60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

7" Reel


D2	$\Phi 178.0 \pm 2.0$
D3	$\Phi 50.0 \text{ Min.}$
D4	$\Phi 13.0 \pm 0.5$
W1	16.0 ± 2.0

Quantity: 3000PCS