

Features

- Low Zener Impedance
- Power Dissipation of 500mW
- High Stability and High Reliability
- Halogen free and RoHS compliant
- Tight voltage tolerance: $\pm 5\%$ for C-series



SOD323



Applications

- General voltage regulation
- Mobile & handheld systems

Ordering Information

- Package: SOD323
- Shipping Qty: 3000/7inch Tape & Reel

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

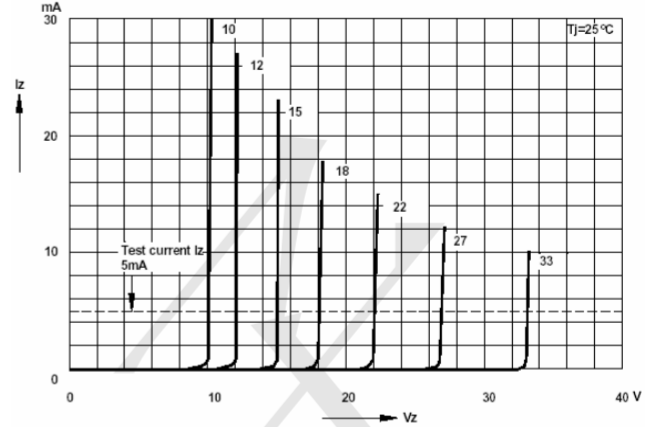
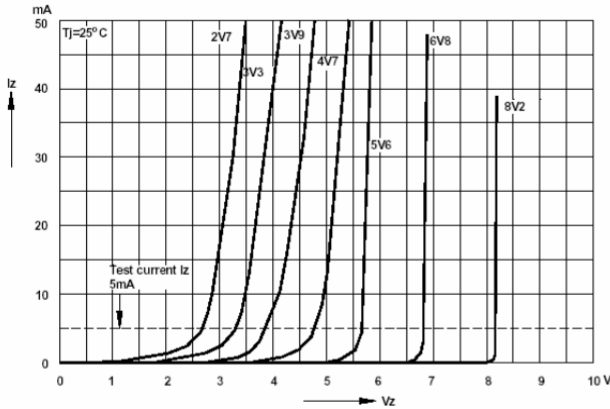
Parameter	Symbol	Value	Unit
Forward Voltage @ $I_F = 10\text{mA}$	V_F	0.9	V
Power Dissipation	P_D	200	mW
Thermal Resistance (Junction-to-Ambient)	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Thermal Resistance (Junction-to-Case)	$R_{\theta JC}$	337	$^\circ\text{C/W}$
Junction Temperature Range	T_J	$-55 \sim +150$	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	$-65 \sim +150$	$^\circ\text{C}$

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

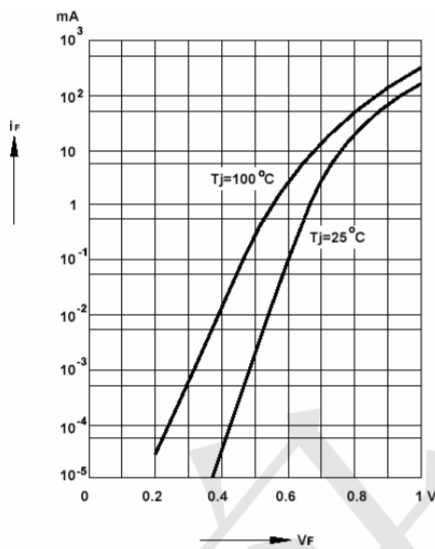
Device	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current		Typical Temperature coefficient @ IZTC=mV/°C		Test Current IZTC
	Vz@Izt			Izt	Zzt @Izt	Zzk @Izk	Izk	IR	VR	Min	Max	
	Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	V			
TPZ2V4C-323	2.4	2.2	2.6	5	100	600	1.0	50	1.0	-3.5	0	5
TPZ2V7C-323	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0	5
TPZ3V0C-323	3.0	2.8	3.2	5	95	600	1.0	10	1.0	-3.5	0	5
TPZ3V3C-323	3.3	3.1	3.5	5	95	600	1.0	5	1.0	-3.5	0	5
TPZ3V6C-323	3.6	3.4	3.8	5	90	600	1.0	5	1.0	-3.5	0	5
TPZ3V9C-323	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0	5
TPZ4V3C-323	4.3	4.0	4.6	5	90	600	1.0	3	1.0	-3.5	0	5
TPZ4V7C-323	4.7	4.4	5.0	5	80	500	1.0	3	2.0	-3.5	0.2	5
TPZ5V1C-323	5.1	4.8	5.4	5	60	480	1.0	2	2.0	-2.7	1.2	5
TPZ5V6C-323	5.6	5.2	6.0	5	40	400	1.0	1	2.0	-2.0	2.5	5
TPZ6V2C-323	6.2	5.8	6.6	5	10	150	1.0	3	4.0	0.4	3.7	5
TPZ6V8C-323	6.8	6.4	7.2	5	15	80	1.0	2	4.0	1.2	4.5	5
TPZ7V5C-323	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3	5
TPZ8V1C-323	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2	5
TPZ9V1C-323	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0	5
TPZ10VC-323	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0	5
TPZ11VC-323	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0	5
TPZ12VC-323	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0	5
TPZ13VC-323	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0	5
TPZ15VC-323	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0	5
TPZ16VC-323	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0	5
TPZ18VC-323	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0	5
TPZ20VC-323	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0	5
TPZ22VC-323	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0	5
TPZ24VC-323	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0	5
TPZ27VC-323	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	2
TPZ30VC-323	30	28.0	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4	2
TPZ33VC-323	33	31.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4	2
TPZ36VC-323	36	34.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4	2
TPZ39VC-323	39	37.0	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2	2
TPZ43VC-323	43	40.0	46.0	2	100	700	1.0	0.1	32.0	10.0	12.0	5
TPZ47VC-323	47	44.0	50.0	2	100	750	1.0	0.1	35.0	10.0	12.0	5
TPZ51VC-323	51	48.0	54.0	2	100	750	1.0	0.1	38.0	10.0	12.0	5

Typical Electrical Characteristic Curves

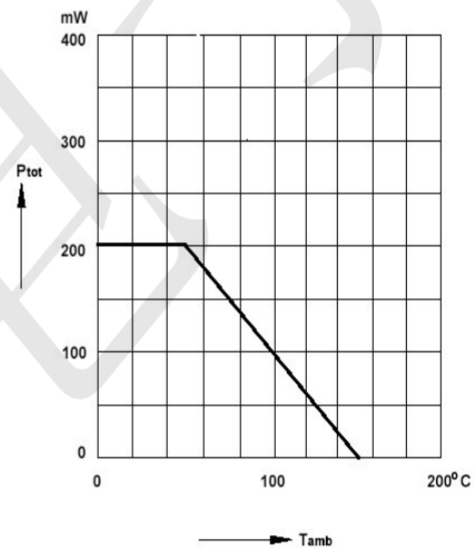
Breakdown characteristics
at $T_J = \text{constant}$ (pulsed)



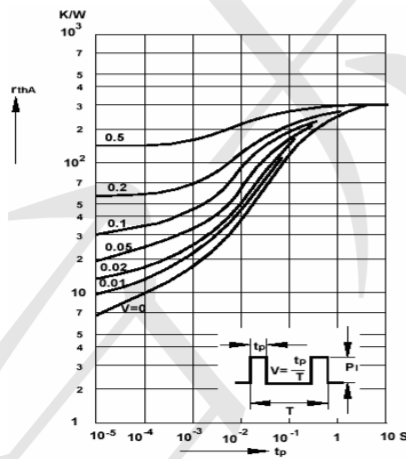
Forward characteristics



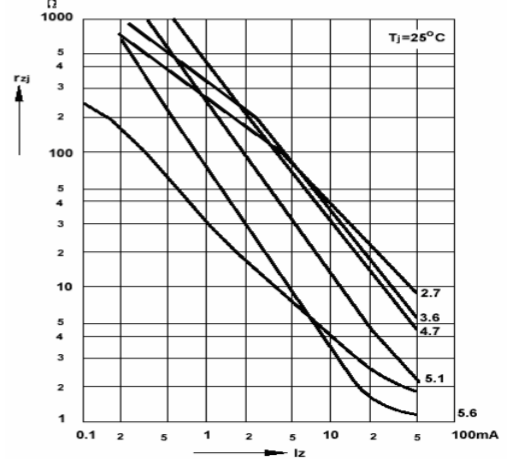
Admissible power dissipation versus ambient temperature



Pulse thermal resistance versus pulse duration

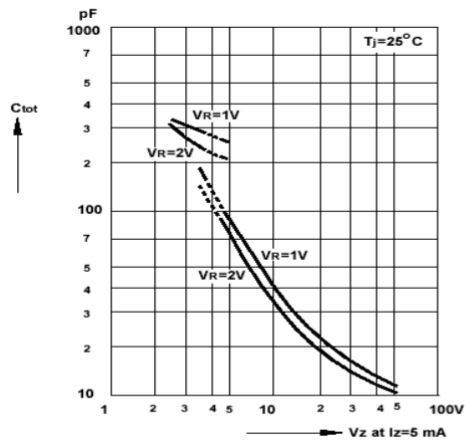


Dynamic resistance versus Zener current

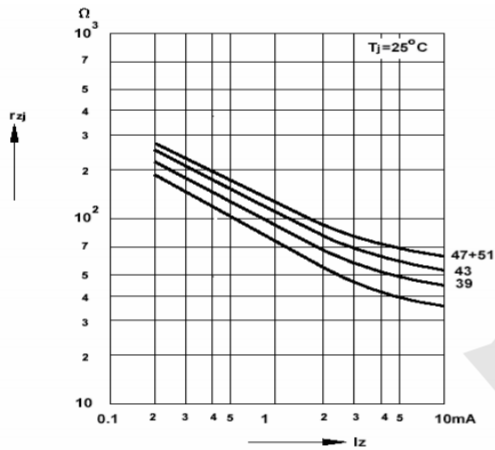


Capacitance versus Zener voltage

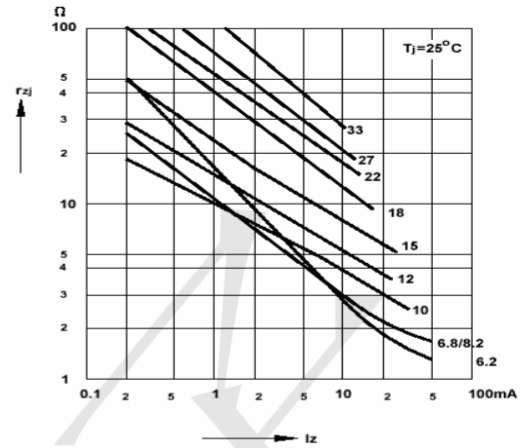
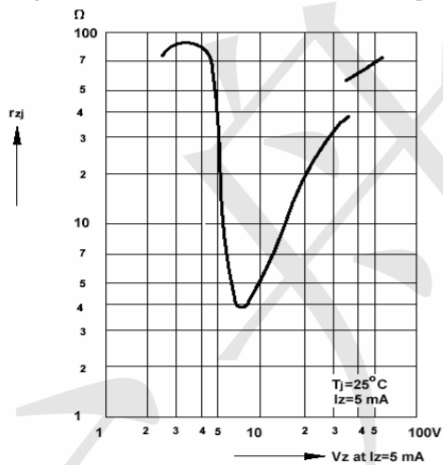
Dynamic resistance versus Zener current



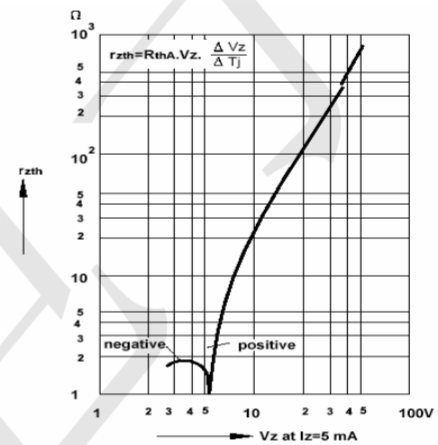
Dynamic resistance versus Zener current



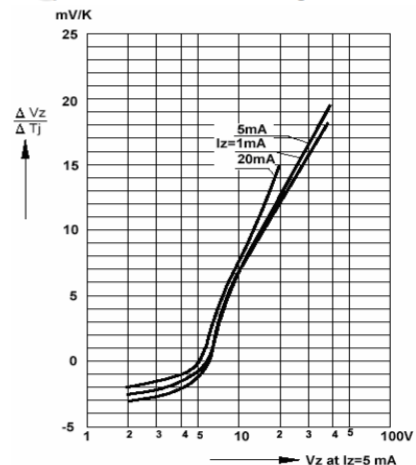
Dynamic resistance versus Zener voltage



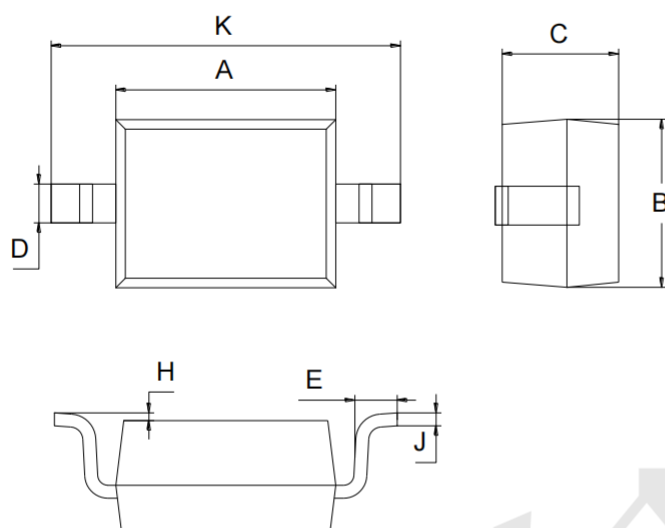
Thermal differential resistance versus Zener voltage



Temperature dependence of Zener voltage versus Zener voltage



Outline Drawing - SOD323



SOD-323		
Dim	Min	Max
A	1.60	1.80
B	1.20	1.40
C	0.80	0.90
D	0.25	0.35
E	0.22	0.42
H	0.02	0.10
J	0.05	0.15
K	2.55	2.75

Mounting Pad Layout-SOD323 (unit: mm)

