

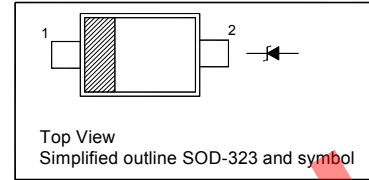
# STZ8000 Series

## Silicon Planar Zener Diodes

For stabilization of power supply application

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

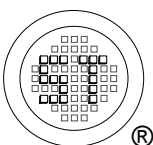


### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Power Dissipation	$P_{tot}$	300	mW
Repetitive Peak Forward Current	$I_{FRM}$	200	mA
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Value	Unit
Thermal Resistance Junction to Ambient Air	$R_{thA}$	417	$^\circ\text{C/W}$
Forward Voltage at $I_F = 10\text{ mA}$	$V_F$	1	V



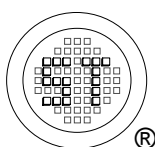
**SEMTECH ELECTRONICS LTD.**  
Subsidiary of Sino-Tech International (BVI) Limited



Dated : 12/06/2009

# STZ8000 Series

Type	Marking Code	Zener Voltage Range <sup>1)</sup>		Dynamic Impedance			Reverse Leakage Current		Temp. coefficient of Zener Voltage
		I <sub>ZT</sub> mA	for V <sub>Z</sub> V	Z <sub>ZT</sub> Ω (Max.)	Z <sub>ZK</sub> Ω (Max.)	at I <sub>ZK</sub> mA	I <sub>R</sub> μA (Max.)	at V <sub>R</sub> V	S <sub>Z</sub> (mV/°C) Typ. at I <sub>ZT</sub>
STZ8024	1C	5	2.28...2.6	100	-	-	120	1	-1.6
STZ8027	1D	5	2.5...2.9	110	-	-	120	1	-2
STZ8027A	1C1		2.5...2.75						
STZ8027B	7D		2.65...2.9						
STZ8030	1E	5	2.8...3.2	120	-	-	50	1	-2.1
STZ8030A	1F1		2.8...3.05						
STZ8030B	7E		2.95...3.2						
STZ8033	1F	5	3.1...3.5	130	-	-	20	1	-2.4
STZ8033A	1J1		3.1...3.35						
STZ8033B	7F		3.25...3.5						
STZ8036	1H	5	3.4...3.8	130	-	-	10	1	-2.4
STZ8036A	1M1		3.4...3.65						
STZ8036B	7H		3.55...3.8						
STZ8039	1J	5	3.7...4.1	130	-	-	10	1	-2.5
STZ8039A	1Q1		3.7...3.97						
STZ8039B	7J		3.87...4.1						
STZ8043	1K	5	4...4.6	130	-	-	10	1	-2.5
STZ8043A	1T1		4.03...4.26						
STZ8043B	7K		4.17...4.4						
STZ8043C	1W1		4.31...4.54						
STZ8047	1M	5	4.4...5	80	800	1	2	1	-1.4
STZ8047A	1Y1		4.45...4.69						
STZ8047B	EB		4.59...4.83						
STZ8047C	2A1		4.74...4.99						
STZ8051	1N	5	4.8...5.4	60	500	1	2	1.5	-0.8
STZ8051A	2C1		4.87...5.12						
STZ8051B	EC		5...5.26						
STZ8051C	2E1		5.14...5.4						
STZ8056	1P	5	5.3...6	40	200	0.5	1	2.5	1.2
STZ8056A	2G1		5.3...5.58						
STZ8056B	ED		5.48...5.76						
STZ8056C	2J1		5.66...5.95						
STZ8062	1R	5	5.8...6.6	30	100	0.5	1	3	2.3
STZ8062A	2L1		5.85...6.15						
STZ8062B	7R		6.05...6.36						
STZ8062C	2N1		6.24...6.56						
STZ8068	1X	5	6.4...7.2	20	60	0.5	0.5	3.5	3
STZ8068A	2Q1		6.44...6.77						
STZ8068B	7X		6.64...6.98						
STZ8068C	2S1		6.85...7.2						
STZ8075	1Y	5	7...7.9	20	60	0.5	0.5	4	4
STZ8075A	2U1		7.07...7.43						
STZ8075B	7Y		7.29...7.67						
STZ8075C	2X1		7.51...7.89						



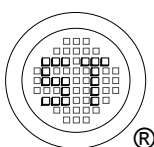
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		I <sub>ZT</sub> mA	for V <sub>Z</sub> V	Z <sub>ZT</sub> Ω (Max.)	Z <sub>ZK</sub> Ω (Max.)	at I <sub>ZK</sub> mA	I <sub>R</sub> μA (Max.)	at V <sub>R</sub> V	S <sub>Z</sub> (mV/°C) Typ. at I <sub>ZT</sub>
STZ8082	1Z	5	7.7...8.7	20	60	0.5	0.5	5	4.6
STZ8082A	2Z1		7.77...8.17						
STZ8082B	EJ		8.03...8.43						
STZ8082C	3B1		8.29...8.7						
STZ8091	2A	5	8.5...9.6	20	60	0.5	0.5	6	5.5
STZ8091A	3D1		8.58...9.02						
STZ8091B	EK		8.87...9.33						
STZ8091C	3F1		9.14...9.6						
STZ8100	2B	5	9.4...10.6	30	60	0.5	0.1	7	6.4
STZ8100A	3H1		9.44...9.92						
STZ8100B	8B		9.75...10.25						
STZ8100C	3K1		10.07...10.59						
STZ8110	2C	5	10.4...11.6	30	60	0.5	0.1	8	7.4
STZ8110A	3M1		10.4...10.94						
STZ8110B	EN		10.73...11.28						
STZ8110C	3P1		11.05...11.6						
STZ8120	2D	5	11.4...12.7	30	80	0.5	0.1	9	8.4
STZ8120A	3R1		11.4...11.96						
STZ8120B	8D		11.73...12.33						
STZ8120C	3T1		12.06...12.68						
STZ8130	2E	5	12.4...14.1	35	80	0.5	0.1	10	9.4
STZ8130A	3W1		12.4...12.99						
STZ8130B	ER		12.73...13.4						
STZ8130C	3Y1		13.25...14.08						
STZ8140	3Z1	5	13.65...14.35	40	80	0.5	0.1	10	10
STZ8150	2F	5	13.9...15.6	40	80	0.5	0.1	11	11.4
STZ8150A	4B1		13.9...14.76						
STZ8150B	EX		14.6...15.35						
STZ8150C	4D1		14.95...15.6						
STZ8160	2H	5	15.3...17.1	50	80	0.5	0.1	12	12.4
STZ8160A	4F1		15.3...16.09						
STZ8160B	8H		15.7...16.5						
STZ8160C	4H1		16.26...17.1						
STZ8180	2J	5	16.9...19.1	60	80	0.5	0.1	13	14.4
STZ8180A	4K1		16.9...17.76						
STZ8180B	8J		17.55...18.45						
STZ8180C	4M1		18.2...19.1						
STZ8200	2K	5	18.8...21.2	80	100	0.5	0.1	15	16.4
STZ8200A	4P1		18.85...19.81						
STZ8200B	8K		19.5...20.5						
STZ8200C	4R1		20.15...21.19						
STZ8220	2M	5	20.8...23.3	80	100	0.5	0.1	17	18.4
STZ8220A	4T1		20.8...21.86						
STZ8220B	8M		21.45...22.55						
STZ8220C	4W1		22.1...23.24						



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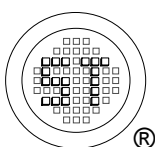
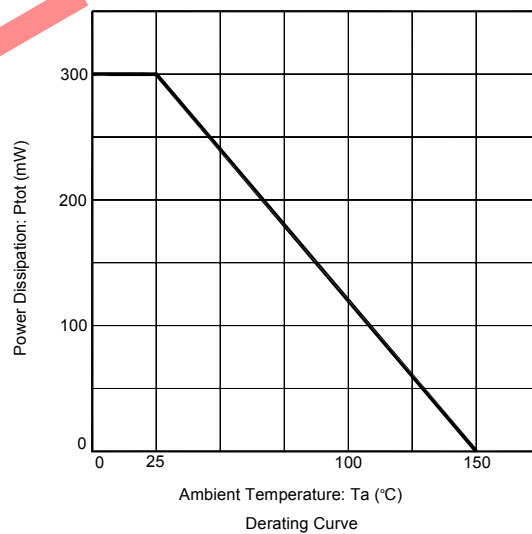


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		I <sub>ZT</sub> mA	for V <sub>Z</sub> V	Z <sub>ZT</sub> Ω (Max.)	Z <sub>ZK</sub> Ω (Max.)	at I <sub>ZK</sub> mA	I <sub>R</sub> μA (Max.)	at V <sub>R</sub> V	S <sub>Z</sub> (mV/°C) Typ. at I <sub>ZT</sub>
STZ8240	2N	5	22.8...25.6	100	120	0.5	0.1	19	20.4
STZ8240A	4Y1		22.8...23.97						
STZ8240B	FC		23.5...24.7						
STZ8240C	5A1		24.35...25.6						
STZ8270	2P	2	25.1...28.9	120	120	0.5	0.1	21	23.4
STZ8270A	5C1		25.3...26.7						
STZ8270B	FD		26.3...27.7						
STZ8270C	5E1		27.3...28.7						
STZ8300	2R	2	28...32	160	160	0.5	0.1	23	26.6
STZ8300A	5G1		28.3...29.7						
STZ8300B	FE		29.3...30.8						
STZ8300C	5J1		30.2...31.8						
STZ8330	2X	2	31...35	200	200	0.5	0.1	25	29.7
STZ8330A	5L1		31.2...32.8						
STZ8330B	8X		32.2...33.8						
STZ8330C	5N1		33.2...34.9						
STZ8360	2Y	2	34...38	250	250	0.5	0.1	27	33
STZ8360A	5Q1		34.1...35.9						
STZ8360B	8Y		35.1...36.9						
STZ8360C	5S1		36.1...37.9						
STZ8390	2Z	2	37...41	300	300	0.5	2	30	35.6
STZ8390A	5U1		37.1...39						
STZ8390B	FJ		38...40						
STZ8390C	5X1		39...41						

<sup>1)</sup> V<sub>Z</sub> is tested with pulses (20 ms).



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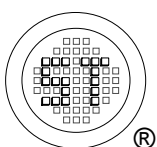
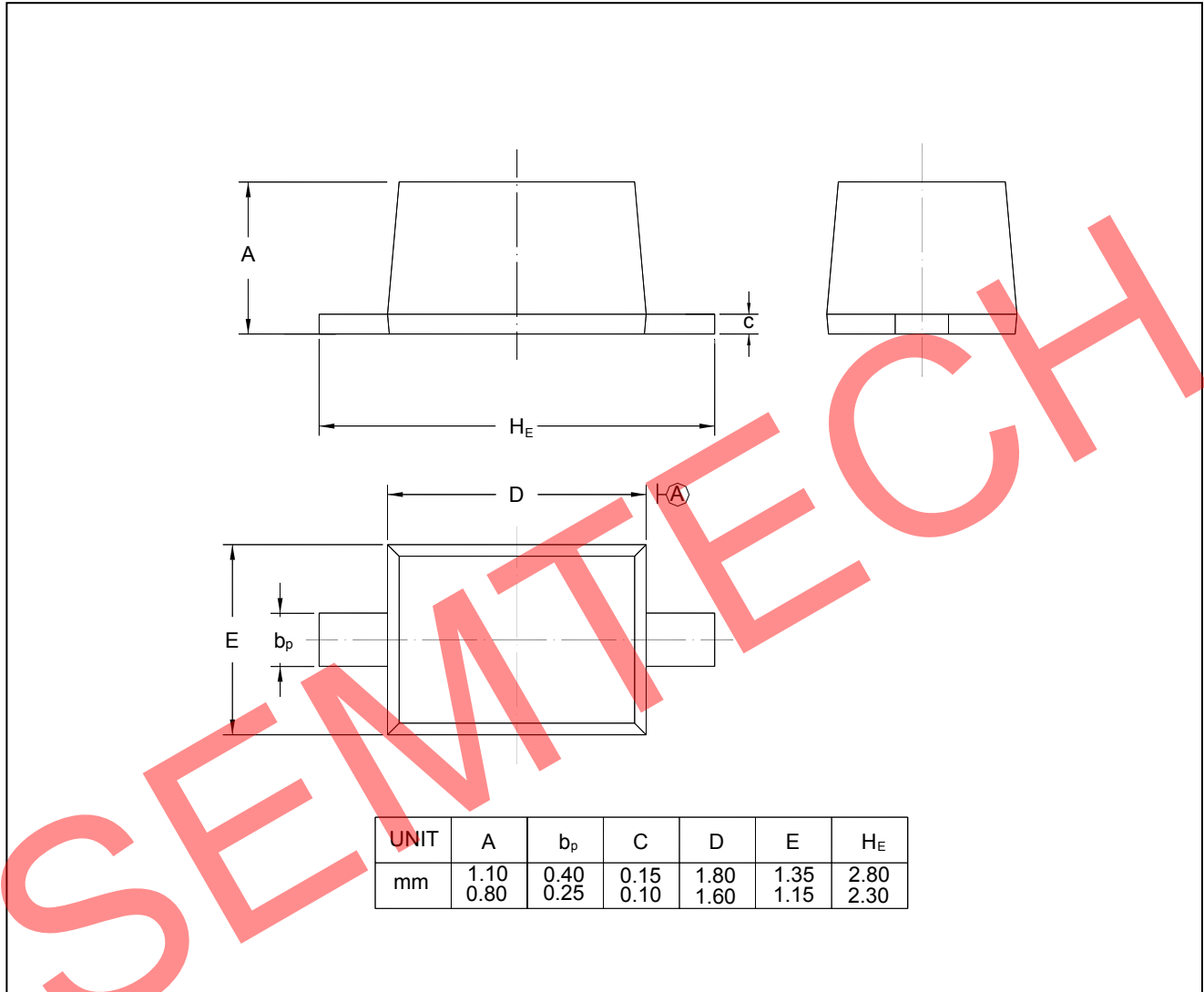
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# STZ8000 Series

## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



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