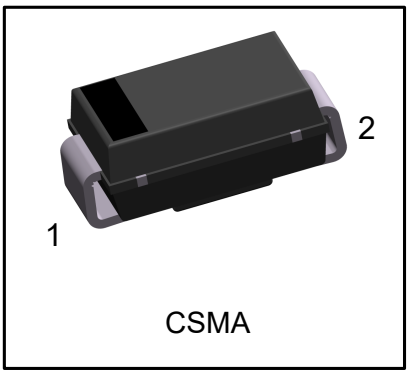
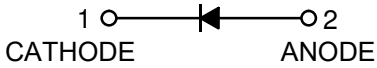
S-CSZA***A

Glass Passivated Junction Zener Voltage Regulator
1.0 Watt Steady State

1. FEATURES

- 1W zener voltage regulator diodes
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Guarding for over voltage protection
- Ideal for surface-mount applications
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- We declare that the material of product complies with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.





2. MECHANICAL DATA

Case: JEDEC DO-214AC, molded plastic over glass die

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.07g

3. MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	VALUE	UNITS
Steady State Power Dissipation at TL=75°C(Note 1)	$P_{M(AV)}$	1.0	W
Z-current	Iz	PV/VZ	mA
Operating Junction Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C
Typical Thermal Tesistance (Note 2)	RθJA	150	°C/W
	RθJC	45	

NOTES:
1. Mounted on Copper Leaf area of 1.57in2 (40mm2).
2. Device mounted on an FR4 PCB, Single-sided copper(50μm thick), mounting pad for cathode 1.77mm×1.65mm, mounting pad for Anode 1.77mm×1.65mm.

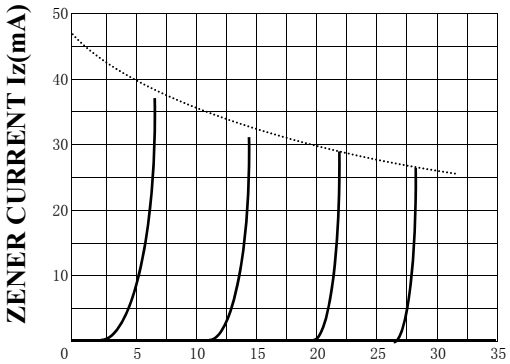
4. ELECTRICAL CHARACTERISTICS (Ta = 25ºC unless otherwise specified.)

Vz tolerance : ±5%; Ta=25ºC Vfmax=1.2V @ IF=200mA; P=1 W

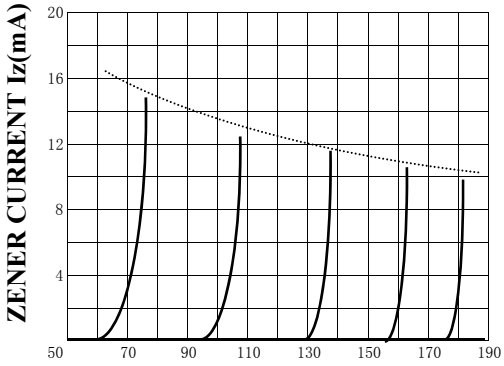
Type	Device Marking Code	Zener Voltage	Z-Current	A and B Sufflx only			Leakage Current		Maximum Regulator Current
		Vz@Izt	Izt	Zzt@Izt	Zzk@Izk	Izk	I_R	V_R	I_{ZM} @ Tamb=50°C
		Volts	mA	Ohms	Ohms	mA	uA	Volts	mA
S-CSZA2.4A	Z2.4	2.4	102	30	1200	1.0	200	1.0	378
S-CSZA2.5A	Z2.5	2.5	98	30	1250			1.0	362
S-CSZA2.7A	Z2.7	2.7	90	30	1300			1.0	334
S-CSZA2.8A	Z2.8	2.8	87	30	1400		100	1.0	324
S-CSZA3.0A	Z3.0	3.0	82	29	1600			1.0	302
S-CSZA3.3A	Z3.3	3.3	76	28	400			1.0	276
S-CSZA3.6A	Z3.6	3.6	69	24	400			1.0	252
S-CSZA3.9A	Z3.9	3.9	64	23	400			1.0	238
S-CSZA4.3A	Z4.3	4.3	58	22	400			1.0	214
S-CSZA4.7A	Z4.7	4.7	53	19	400			1.0	194
S-CSZA5.1A	Z5.1A	5.1	49	7.0	550			1.0	178
S-CSZA5.6A	Z5.6A	5.6	45	5.0	600			2.0	164
S-CSZA6.2A	Z6.2A	6.2	41	2.0	700			3.0	146
S-CSZA6.8A	Z6.8A	6.8	37	4.0	1300			4.0	133
S-CSZA7.5A	Z7.5A	7.5	34	4.5	1300	0.5	70	5.0	121
S-CSZA8.2A	Z8.2A	8.2	31	5.5	1300	0.5		6.0	110
S-CSZA9.1A	Z9.1A	9.1	28	6.0	1300	0.5		7.0	100
S-CSZA10A	Z10A	10	25	7.0	1300	0.25	2	7.6	91
S-CSZA11A	Z11A	11	23	8.0	1300			8.4	83
S-CSZA12A	Z12A	12	21	9.0	1300			9.1	76
S-CSZA13A	Z13A	13	19	10	1300			9.9	69
S-CSZA15A	Z15A	15	17	14	1300		0.5	11.4	61
S-CSZA16A	Z16A	16	15.5	16	1300			12.2	57
S-CSZA18A	Z18A	18	14	20	1300			13.7	50
S-CSZA20A	Z20A	20	12.5	22	1300			15.2	45
S-CSZA22A	Z22A	22	11.5	23	1300			16.7	41
S-CSZA24A	Z24A	24	10.5	25	1300			18.2	38
S-CSZA27A	Z27A	27	9.5	35	1300			20.6	34
S-CSZA30A	Z30A	30	8.5	40	1500			22.8	30
S-CSZA33A	Z33A	33	7.5	45	1500			25.1	27
S-CSZA36A	Z36A	36	7.0	50	1500			27.4	25
S-CSZA39A	Z39A	39	6.5	60	1500			29.7	23
S-CSZA43A	Z43A	43	6.0	70	2500			32.7	22
S-CSZA47A	Z47A	47	5.5	80	2500			35.8	19
S-CSZA51A	Z51A	51	5.0	95	2500			38.8	18
S-CSZA56A	Z56A	56	4.5	110	2500			42.6	16
S-CSZA62A	Z62A	62	4.0	125	2500			47.1	14
S-CSZA68A	Z68A	68	3.7	150	2500			51.7	13
S-CSZA75A	Z75A	75	3.3	175	2500			56	12
S-CSZA82A	Z82A	82	3.0	200	3000			62.2	11
S-CSZA91A	Z91A	91	2.8	250	3000			69.2	10
S-CSZA100A	Z100A	100	2.5	350	3000			76	9
S-CSZA110A	Z110A	110	2.0	550	5000			83	8
S-CSZA120A	Z120A	120	1.5	750	5500			90	7
S-CSZA130A	Z130A	130	1.0	900	6000			98	6
S-CSZA150A	Z150A	150	1.0	1200	6500			113	6
S-CSZA160A	Z160A	160	1.0	1350	7000			120	6
S-CSZA180A	Z180A	180	1.0	1650	8500			135	5
S-CSZA200A	Z200A	200	1.0	1950	10000			150	4

5. ELECTRICAL CHARACTERISTIC CURVES

Vz--Iz

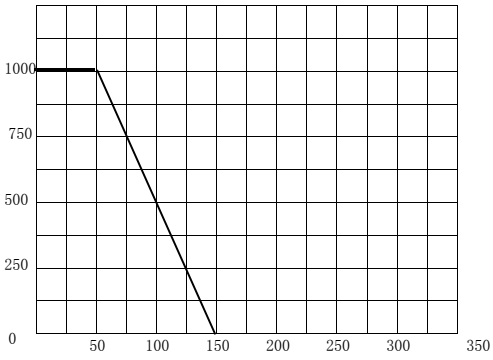


Vz--Iz



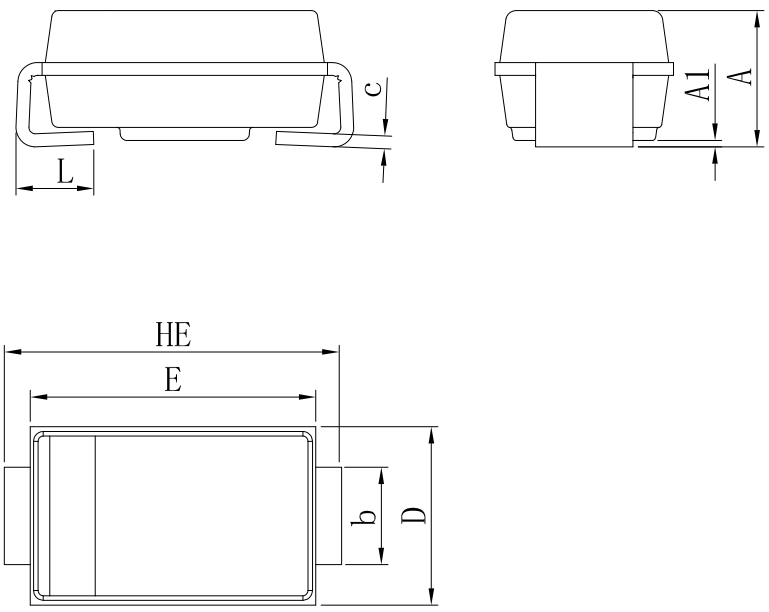
ZENER VOLTAGE Vz (V)

P--Ta



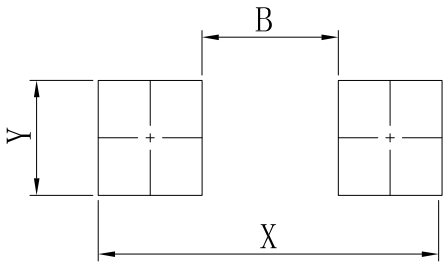
AMBIENT TEMPERATURE Ta (℃)

6. OUTLINE AND DIMENSIONS



CSMA			
DIM	MIN	TYP	MAX
A	1.97	2.10	2.29
A1	0.05	0.10	0.20
b	1.35	1.50	1.65
c	0.10	0.20	0.30
D	2.40	2.75	2.92
E	4.10	4.40	4.57
HE	4.70	5.27	5.59
L	0.76	1.20	1.52
All Dimensions in mm			

7. SOLDERING FOOTPRINT



CSMA		
DIM	MIN	MAX
X	5.30REF	
Y	1.72	1.82
B	1.90	2.30

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.

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