

# Surface Mount Zener Diodes

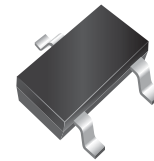
## CZRT55C2V4-G thru CZRT55C39-G

**Voltage: 2.4 ~ 29 Volts**

**Power: 410 mW**

**Features:**

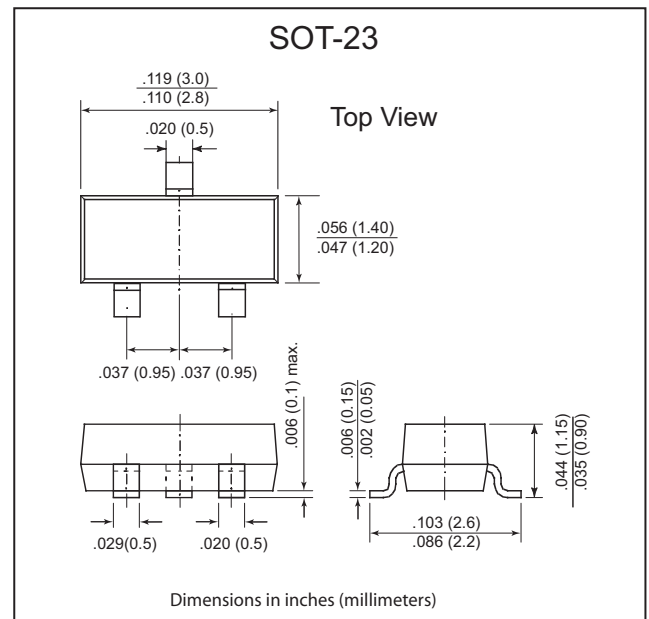
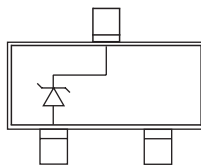
- Planar Die Constructions
- 500mW Power Dissipation
- Zener Voltages from 2.4V ~ 39V
- Ideally Suited for Automated Assembly Processes



**Mechanical Data:**

- Case: SOD-23, Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Approx. Weight: 0.008 gram

**Circuit Schematic:**



### Maximum Ratings and Thermal Characteristics

Parameter	Symbols	Value	Units
Power Dissipation (Note A) at 75°C	$P_D$	410	mW
Peak Forward Surge Current Surge, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) (Note B)	$I_{FSM}$	2	Amps
Operating Junction and Storage Temperature Range	$T_J$	-55 to +150	°C

**Notes:**

- A. Mounted on 5.0mm<sup>2</sup>(.013mm thick) land areas.  
 B. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

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## CZRT55C2V4-G thru CZRT55C39-G

### Maximum Ratings and Electrical Characteristics

(TA=25°C unless otherwise noted) V<sub>F</sub>=1.2V max, I<sub>F</sub>=100mA for all types

Part Number	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current		Typical Temp. Coefficient	Max Zener Current
	V <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>ZT</sub> @ I <sub>ZT</sub>		Z <sub>ZK</sub> @ I <sub>ZK</sub>		I <sub>R</sub> @ V <sub>R</sub>		T <sub>C</sub>	I <sub>ZM</sub> @ T <sub>A</sub>
	Nom. V	Min. V	Max. V	Ohm	mA	Ohm	mA	nA	V		mA
<b>410 mWatts Zener Diodes</b>											
CZRT55C2V4-G	2.4	2.28	2.56	85	5	600	1	100000	1	-0.075	-
CZRT55C2V7-G	2.7	2.5	2.9	83	5	500	1	75000	1	-0.065	134
CZRT55C3V0-G	3.0	2.8	3.2	95	5	500	1	50000	1	-0.06	118
CZRT55C3V3-G	3.3	3.1	3.5	95	5	500	1	25000	1	-0.055	109
CZRT55C3V6-G	3.6	3.4	3.8	95	5	500	1	15000	1	-0.055	100
CZRT55C3V9-G	3.9	3.7	4.1	95	5	500	1	10000	1	-0.05	92
CZRT55C4V3-G	4.3	4	4.6	95	5	500	1	5000	1	-0.035	84
CZRT55C4V7-G	4.7	4.4	5	78	5	500	1	5000	2	-0.015	76
CZRT55C5V1-G	5.1	4.8	5.4	60	5	480	1	100	0.8	0.005	67
CZRT55C5V6-G	5.6	5.2	6	40	5	400	1	100	1	0.02	59
CZRT55C6V2-G	6.2	5.8	6.6	10	5	200	1	100	2	0.03	54
CZRT55C6V8-G	6.8	6.4	7.2	8	5	150	1	100	3	0.045	49
CZRT55C7V5-G	7.5	7	7.9	7	5	50	1	100	5	0.05	44
CZRT55C8V2-G	8.2	7.7	8.7	7	5	50	1	100	6	0.055	40
CZRT55C9V1-G	9.1	8.5	9.6	10	5	50	1	100	7	0.065	36
CZRT55C10-G	10.0	9.4	10.6	15	5	70	1	100	7.5	0.07	33
CZRT55C11-G	11.0	10.4	11.6	20	5	70	1	100	8.5	0.075	30
CZRT55C12-G	12.0	11.4	12.7	20	5	90	1	100	9	0.08	28
CZRT55C13-G	13.0	12.4	14.1	25	5	110	1	100	10	0.08	25
CZRT55C15-G	15	13.8	15.6	30	5	110	1	100	11	0.09	23
CZRT55C16-G	16	15.3	17.1	40	5	170	1	100	12	0.09	20
CZRT55C18-G	18	16.8	19.1	50	5	170	1	100	14	0.09	18
CZRT55C20-G	20	18.8	21.2	50	5	220	1	100	15	0.09	17
CZRT55C22-G	22	20.8	23.3	55	5	220	1	100	17	0.09	16
CZRT55C24-G	24	22.8	25.6	80	5	220	1	100	18	0.09	13
CZRT55C27-G	27	25.1	28.9	80	5	250	1	100	20	0.09	12
CZRT55C30-G	30	28	32	80	5	250	1	100	22.5	0.09	10
CZRT55C33-G	33	31	35	80	5	250	1	100	25	0.09	9
CZRT55C36-G	36	34	38	90	5	250	1	100	27	0.09	9
CZRT55C39-G	39	37	41	90	5	300	1	100	29	0.11	8

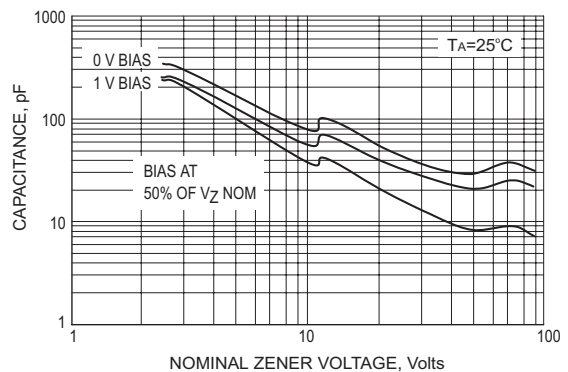
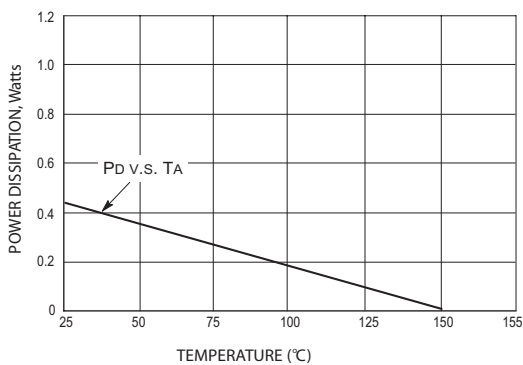
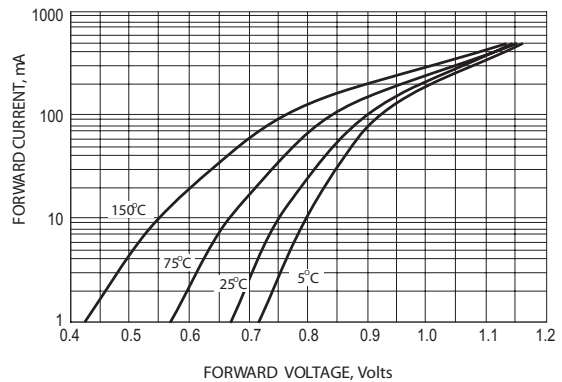
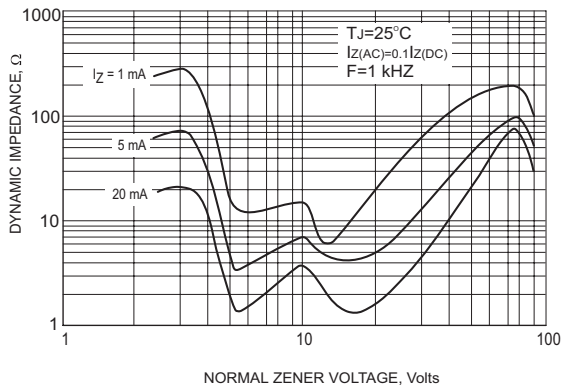
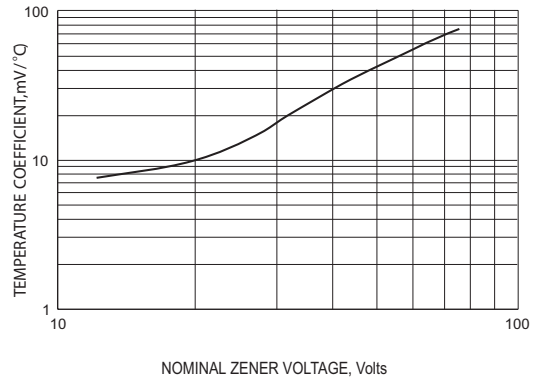
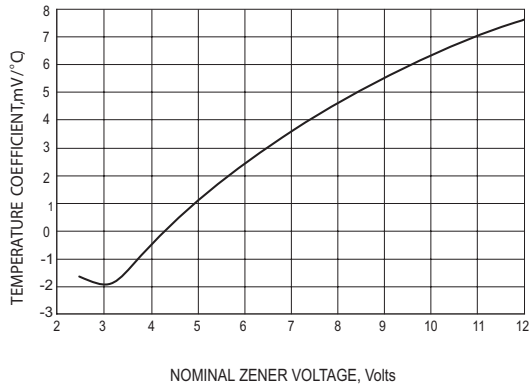
**NOTE:**

1. Tolerance and Type Number Designation. The type numbers listed have a standard tolerance on the nominal zener voltage of ±5%.
2. Specials Available Include:
  - A. Nominal zener voltages between the voltages shown and tighter voltage tolerances.
  - B. Matched sets.
3. Zener Voltage (V<sub>Z</sub>) Measurement. Guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature (TL) at 300C, from the diode body.
4. Zener Impedance (Z<sub>Z</sub>) Derivation. The zener impedance is derived from the 60 cycle ac voltage, which results when an AC current having an rms value equal to 10% of the dc zener current (I<sub>ZT</sub> or I<sub>ZK</sub>) is superimposed on I<sub>ZT</sub> or I<sub>ZK</sub>.
5. Surge Current (I<sub>R</sub>) Non-Repetitive. The rating listed in the electrical characteristics table is maximum peak, non-repetitive, reverse surge current of 1/2 square wave or equivalent sine wave pulse of 1/120 second duration superimposed on the test current, I<sub>ZT</sub>, per JEDEC registration; however, actual device capability is as described in Figure 5.

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## CZRT55C2V4-G thru CZRT55C39-G

### Rating and Characteristic Curves



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