

Surface Mount Zener Diodes

CZRT55C4V7 Thru CZRT55C39

Voltage: 2.4 - 39 Volts

Power: 410 mWatts

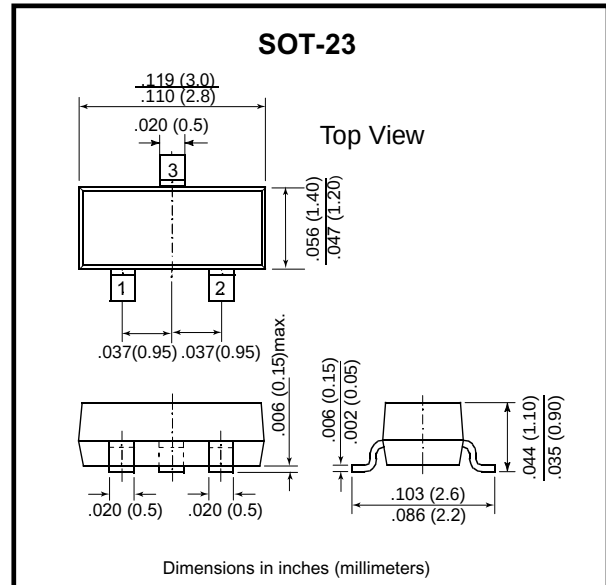
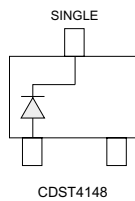


Features

- Planar Die construction
- 410mW Power Dissipation
- Zener Voltages from 2.4V - 39V
- Ideally Suited for Automated Assembly Processes

Mechanical data

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



Maximum Ratings and Electrical Characteristics

Parameter	Symbol	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}	2.0	Amps
Operating Junction and Storage Temperature Range	T_J	-55 to +150	°C

NOTES:

A. Mounted on 5.0mm2(.013mm thick) land areas.

B. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

Maximum Ratings and Electrical Characteristics

(TA=25°C unless otherwise noted) V_F=1.2V max, I_F=100mA for all types

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

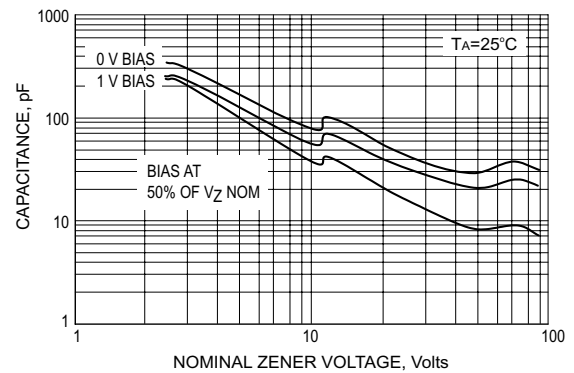
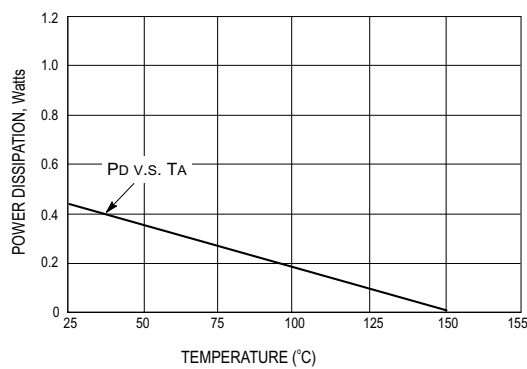
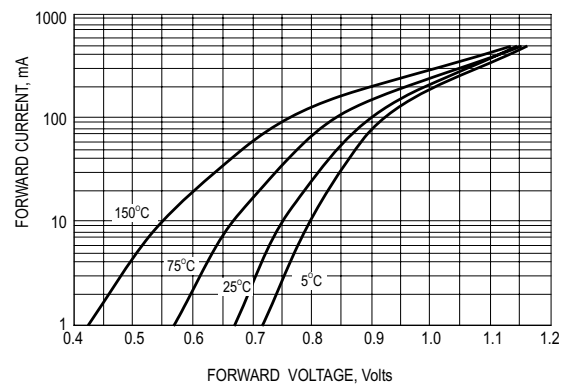
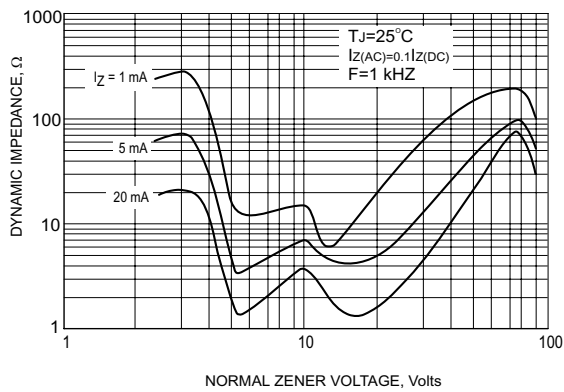
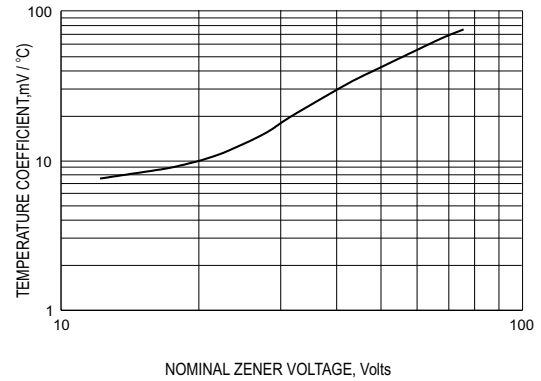
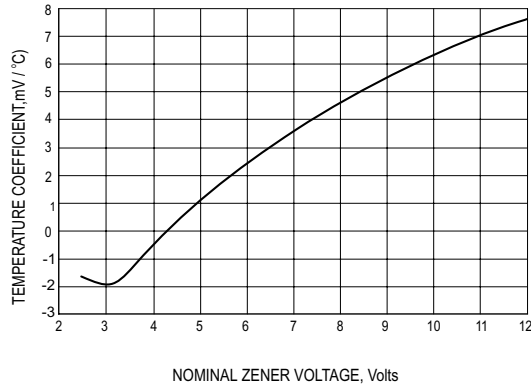
- A. Nominal zener voltages between the voltages shown and tighter voltage tolerances.
- B. Matched sets.

3.Zener Voltage (V_Z) Measurement. Guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature (TL) at 300C, from the diode body.

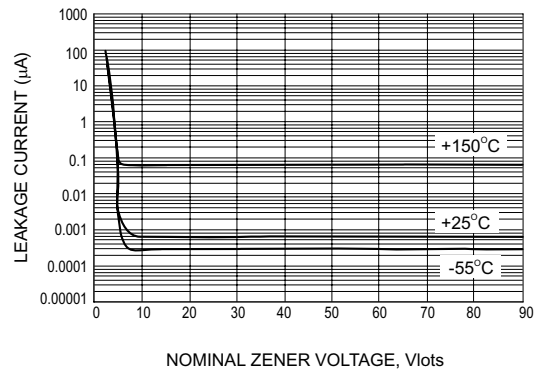
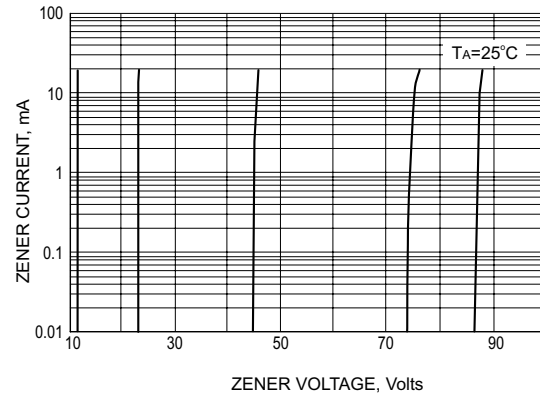
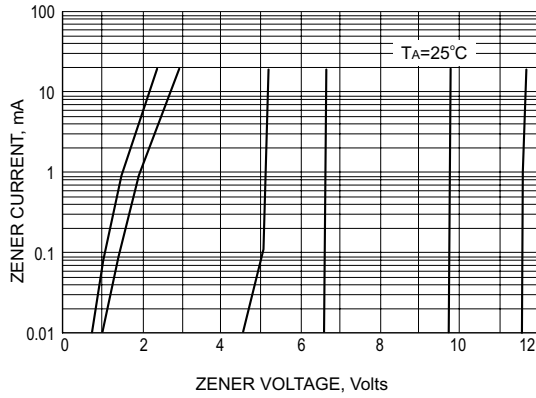
4.Zener Impedance (Z_Z) Derivation. The zener impedance is derived from the 60 cycle ac voltage, which results when an AC current having an rms value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}.

5.Surge Current (I_R) 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_{ZT}, per JEDEC registration; however, actual device capability is as described in Figure 5.

Rating and Characteristic Curves (CZRT55C4V7 Thru CZRT55C39)



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