

Surface Mount Zener Diodes

COMCHIP
SMD DIODE SPECIALIST



CZRT5221-G thru CZRT5259-G

Voltage: 2.4 ~ 29 Volts

Power: 500 mW

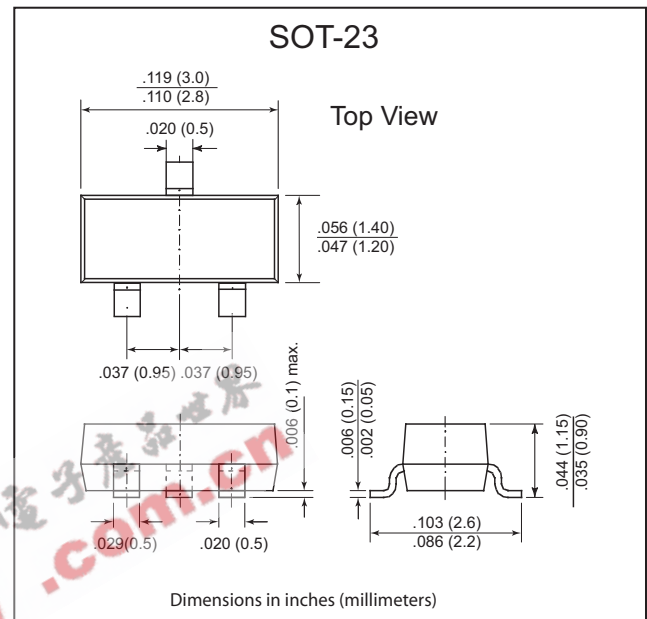
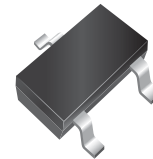
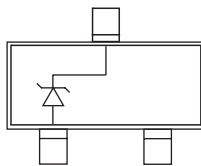
Features:

- 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	500	mW
Peak Forward Surge Current Surge, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) (Note B)	I_{FSM}	4	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.

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Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted) $V_F=1.2\text{V}$ max, $I_F=100\text{mA}$ for all types.)

Part Number	Max. Zener Impedance			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
500 mWatts Zener Diodes											
CZRT5221-G	2.4	2.28	2.52	30	20	1200	0.25	100	1	-0.070	188
CZRT5222-G	2.5	2.38	2.63	30	20	1250	0.25	100	1	-0.065	180
CZRT5223-G	2.7	2.57	2.84	30	20	1300	0.25	75	1	-0.060	167
CZRT5225-G	3	2.85	3.15	30	20	1600	0.25	50	1	-0.055	150
CZRT5226-G	3.3	3.14	3.47	28	20	1600	0.25	25	1	0.030	138
CZRT5227-G	3.6	3.42	3.78	25	20	1700	0.25	15	1	0.030	126
CZRT5228-G	3.9	3.71	4.10	23	20	1900	0.25	10	1	+0.038	115
CZRT5229-G	4.3	4.09	4.52	22	20	2000	0.25	5	1	+0.038	106
CZRT5230-G	4.7	4.47	4.94	19	20	1900	0.25	5	2	+0.045	97
CZRT5231-G	5.1	4.85	5.36	17	20	1600	0.25	5	2	+0.050	89
CZRT5232-G	5.6	5.32	5.88	11	20	1600	0.25	5	3	+0.058	81
CZRT5233-G	6.0	5.70	6.30	11	20	1600	0.25	5	3.5	+0.060	77
CZRT5234-G	6.2	5.89	6.51	7	20	1000	0.25	5	4	+0.062	73
CZRT5235-G	6.8	6.46	7.14	5	20	750	0.25	3	5	+0.065	67
CZRT5236-G	7.5	7.13	7.88	6	20	500	0.25	3	6	+0.068	61
CZRT5237-G	8.2	7.79	8.61	8	20	500	0.25	3	6	+0.075	55
CZRT5239-G	9.1	8.65	9.56	10	20	600	0.25	3	6.5	+0.076	50
CZRT5240-G	10	9.50	10.50	17	20	600	0.25	3	8	+0.077	45
CZRT5241-G	11	10.45	11.55	22	20	600	0.25	3	8.4	+0.079	41
CZRT5242-G	12	11.40	12.60	30	20	600	0.25	2	9.1	+0.082	38
CZRT5243-G	13	12.35	13.65	13	9.5	600	0.25	1	9.9	+0.082	35
CZRT5245-G	15	14.25	15.75	16	8.5	600	0.25	0.5	11	+0.083	30
CZRT5246-G	16	15.20	16.80	17	7.8	600	0.25	0.1	12	+0.084	28
CZRT5248-G	18	17.10	18.90	21	7	600	0.25	0.1	14	+0.085	25
CZRT5250-G	20	19.00	21.00	25	6.2	600	0.25	0.1	15	+0.086	23
CZRT5251-G	22	20.90	23.10	29	5.6	600	0.25	0.1	17	+0.086	21
CZRT5252-G	24	22.80	25.20	33	5.2	600	0.25	0.1	18	+0.087	19.1
CZRT5254-G	27	25.65	28.35	41	5	600	0.25	0.1	21	+0.087	16.8
CZRT5255-G	28	26.60	29.40	44	4.5	600	0.25	0.1	21	+0.089	16.2
CZRT5256-G	30	28.50	31.50	49	4.2	600	0.25	0.1	23	+0.090	15.1
CZRT5257-G	33	31.35	34.65	58	3.8	700	0.25	0.1	25	+0.091	13.8
CZRT5258-G	36	34.20	37.80	70	3.4	700	0.25	0.1	27	+0.091	12.6
CZRT5259-G	39	37.05	40.95	80	3.2	800	0.25	0.1	30	+0.092	11.6

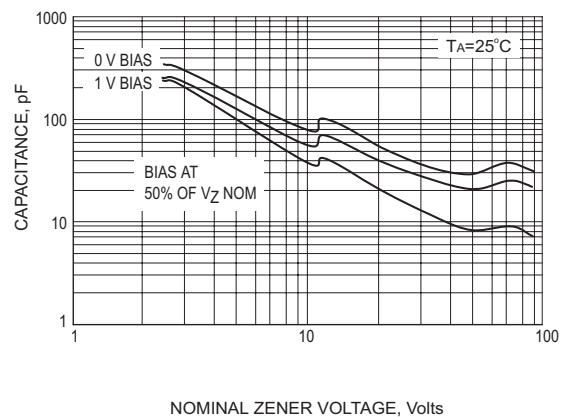
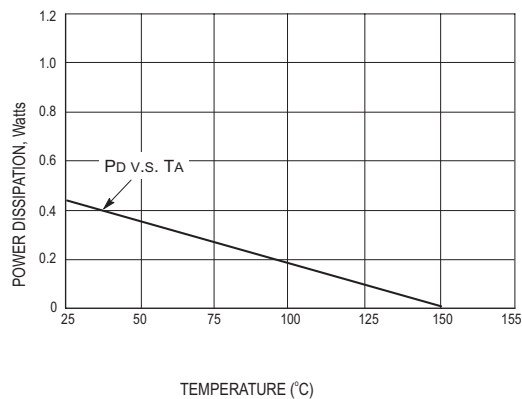
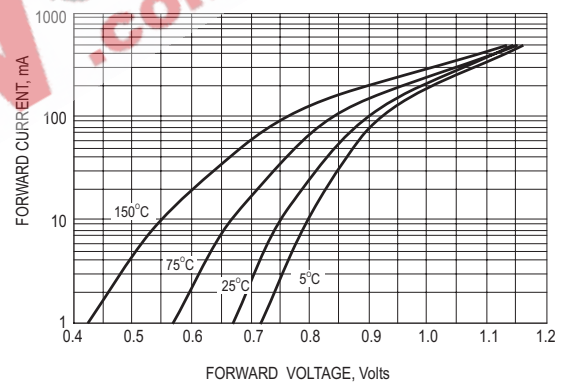
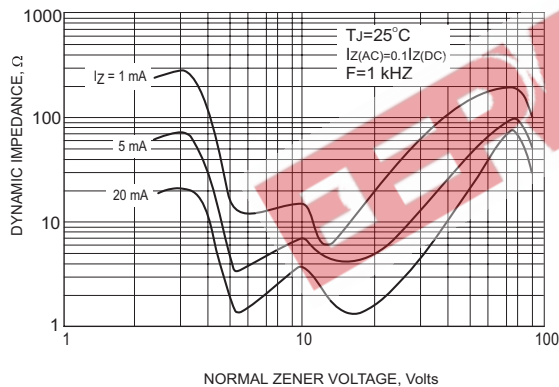
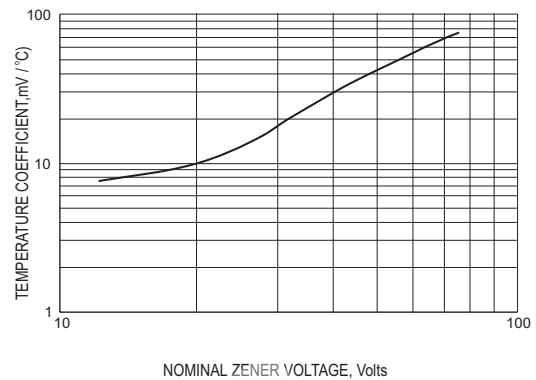
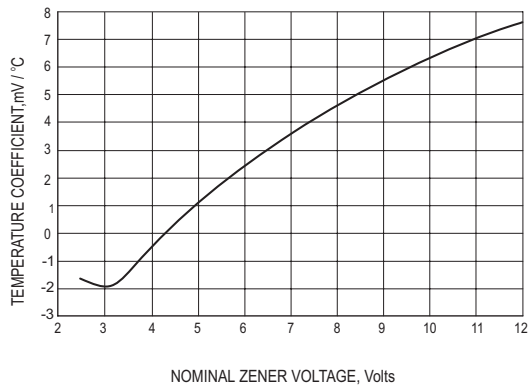
NOTE:

- 1.Tolerance and Type Number Designation. The type numbers listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$ for 'B' and $\pm 10\%$ for 'A'
- 2.Specials Available Include:
 - A. Nominal zener voltages between the voltages shown and tighter voltage tolerances.
 - B. Matched sets.
3. Zener Voltage (VZ) Measurement. Guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature (TL) at 30°C from the diode body.
4. Zener Impedance (ZZ) 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 (IR) 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.

"-G" suffix designated RoHS compliant version

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