

SMD Zener Diode



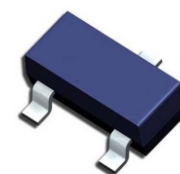
SMD Diodes Specialist

CZRT55C2V4-G Thru CZRT55C39-G

Voltage: 2.4 to 39 Volts

Power: 410 mWatts

RoHS Device



Features

- Planar die construction
- 410mW power dissipation
- Ideally suited for automated assembly process
- Pb free product are available : 99% Sn above can meet RoHS

Mechanical data

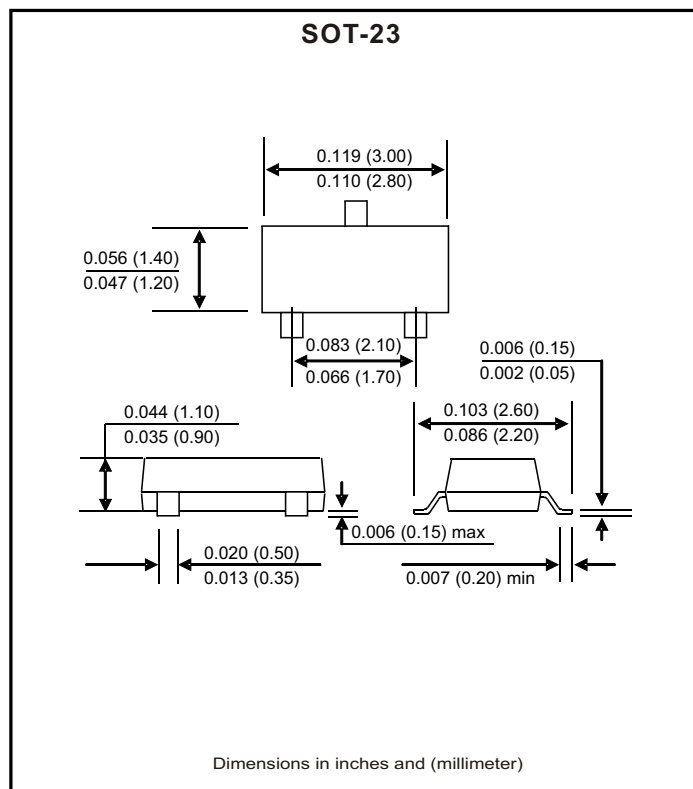
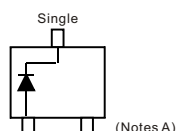
Case: SOT-23, Molded plastic

Terminals: Solderable per MIL-STD-202G, method 208

Polarity: See diagram below

Weight: 0.008 gram(approx.)

Mounting position: Any



Maximum Rating And Electrical Characteristics

Parameter	Symbol	Value	Unit
Maximum forward voltage drop at IF=10mA	V _F	0.9	V
Power dissipation (Notes B), T _A = 25°C	P _D	410	mW
Peak forward surge current, 8.3mS single half sin-wave superimposed on rated load (JEDEC method) (Notes C)	I _{FSM}	2.0	A
Operating junction and storage temperature range	T _J	-55 to +150	°C

Notes:

A. For structure purpose only.

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

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

Electrical Characteristics(Ta = 25°C)

Part Number	Zener Voltage			Operating Resistance		Rising Operating Resistance		Reverse Current		Marking Code
	V _Z (V)@I _{ZT}			Z _{ZT} (Ohm)		Z _{ZK} (Ohm)		I _R (uA)		
	Min.	Nom.	Max.	Max.	I _{ZT} (mA)	Max.	I _{ZK} (mA)	Max.	V _R (V)	
CZRT55C2V4	2.28	2.4	2.52	100	5.0	600	1.0	50	1	W1
CZRT55C2V7	2.57	2.7	2.84	100	5.0	600	1.0	20	1	W2
CZRT55C3	2.85	3	3.15	95	5.0	600	1.0	10	1	W3
CZRT55C3V3	3.14	3.3	3.47	95	5.0	600	1.0	5.0	1	W4
CZRT55C3V6	3.42	3.6	3.78	90	5.0	600	1.0	5.0	1	W5
CZRT55C3V9	3.71	3.9	4.10	90	5.0	600	1.0	3.0	1	W6
CZRT55C4V3	4.09	4.3	4.52	90	5.0	600	1.0	3.0	1	W7
CZRT55C4V7	4.47	4.7	4.94	80	5.0	500	1.0	3.0	2	W8
CZRT55C5V1	4.85	5.1	5.36	60	5.0	480	1.0	2.0	2	W9
CZRT55C5V6	5.32	5.6	5.88	40	5.0	400	1.0	1.0	2	WA
CZRT55C6V2	5.89	6.2	6.51	10	5.0	150	1.0	3.0	4	WB
CZRT55C6V8	6.46	6.8	7.14	15	5.0	80	1.0	2.0	4	WC
CZRT55C7V5	7.13	7.5	7.88	15	5.0	80	1.0	1.0	5	WD
CZRT55C8V2	7.79	8.2	8.61	15	5.0	80	1.0	0.7	5	WE
CZRT55C9V1	8.65	9.1	9.56	15	5.0	100	1.0	0.5	6	WF
CZRT55C10	9.50	10	10.50	20	5.0	150	1.0	0.2	7	WG
CZRT55C11	10.45	11	11.55	20	5.0	150	1.0	0.1	8	WH
CZRT55C12	11.40	12	12.60	25	5.0	150	1.0	0.1	8	WI
CZRT55C13	12.35	13	13.65	30	5.0	170	1.0	0.1	8	WK
CZRT55C15	14.25	15	15.75	30	5.0	200	1.0	0.1	10.5	WL
CZRT55C16	15.20	16	16.80	40	5.0	200	1.0	0.1	11.2	WM
CZRT55C18	17.10	18	18.90	45	5.0	225	1.0	0.1	12.6	WN
CZRT55C20	19.00	20	21.00	55	5.0	225	1.0	0.1	14	WO
CZRT55C22	20.90	22	23.10	55	5.0	250	1.0	0.1	15.4	WP
CZRT55C24	22.80	24	25.20	70	5.0	250	1.0	0.1	16.8	WR
CZRT55C27	25.65	27	28.35	80	5.0	300	1.0	0.1	18.9	WS
CZRT55C30	28.50	30	31.50	80	5.0	300	1.0	0.1	21	WT
CZRT55C33	31.35	33	34.65	80	5.0	325	1.0	0.1	23.1	WU
CZRT55C36	34.20	36	37.80	90	5.0	350	1.0	0.1	25.2	WW
CZRT55C39	37.05	39	40.95	130	5.0	350	1.0	0.1	27.3	WX

RATING AND CHARACTERISTIC CURVES (CZRT55C2V4-G Thru CZRT55C39-G)

Fig.1 Temperature coefficients

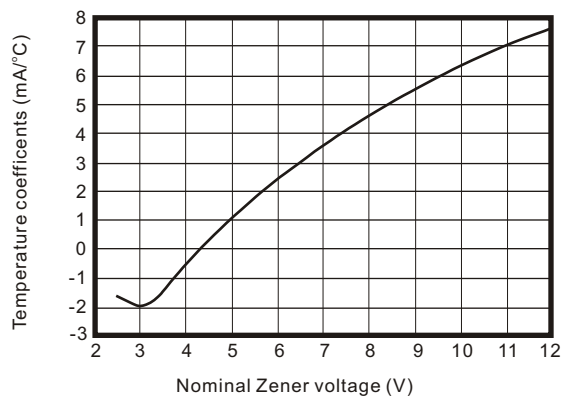


Fig.2 Temperature coefficients

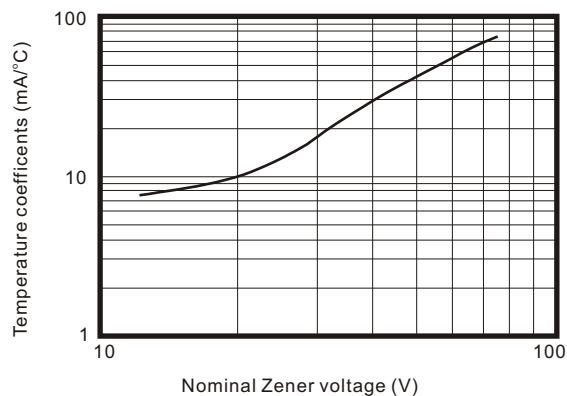


Fig.3 Effect of Zener voltage on Zener impedance

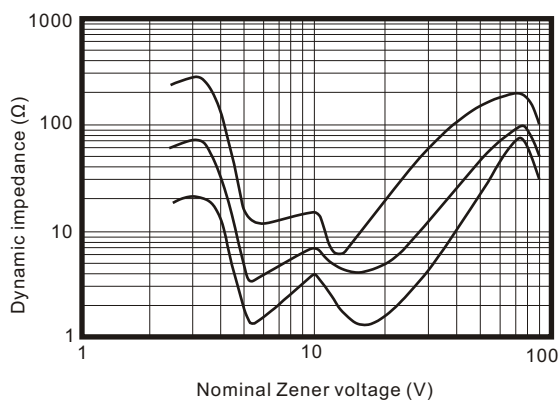


Fig.4 Typical forward voltage

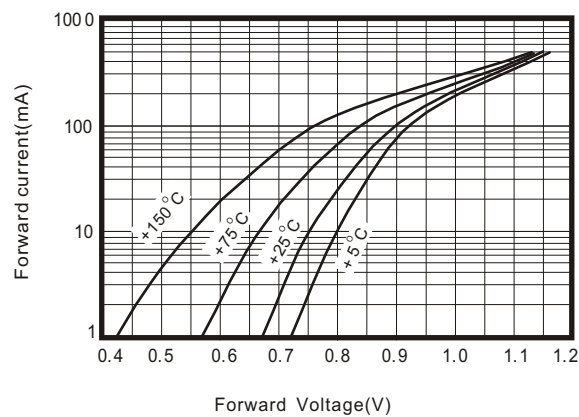


Fig.5 Steady state power derating

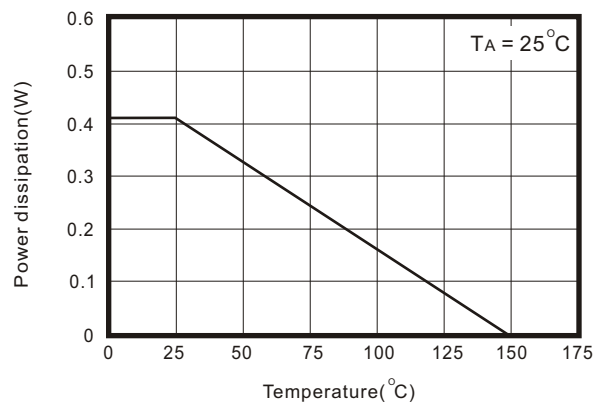
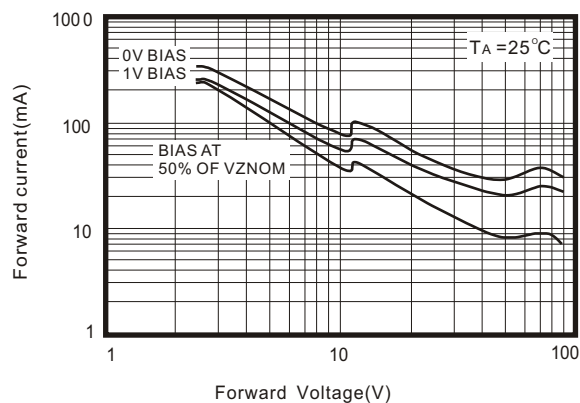


Fig.5 Typical capacitance



RATING AND CHARACTERISTIC CURVES (CZRT55C2V4-G Thru CZRT55C39-G)

Fig.7 Zener voltage V.S. Zener current

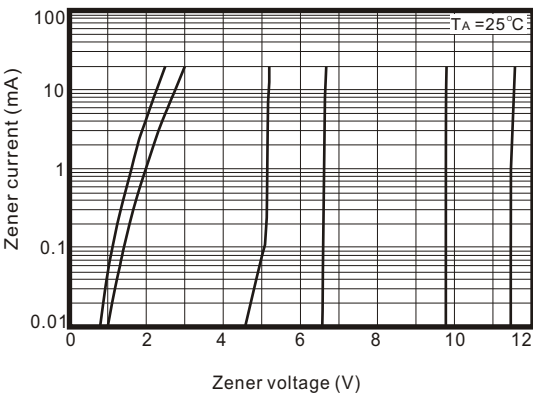


Fig.8 Zener voltage V.S. Zener current

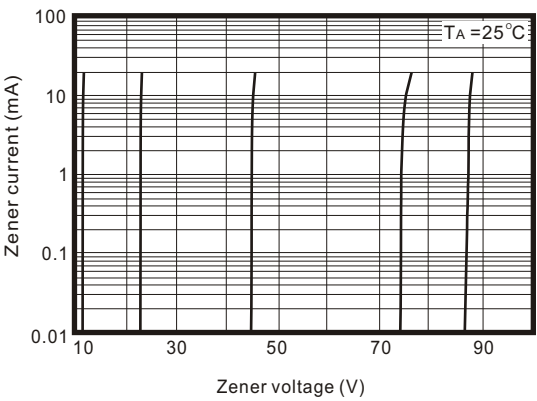


Fig.9 Typical leakage current

