

SMD Zener Diode

CZRV52C2V4S-G Thru. CZRV52C43S-G

Voltage: 2.4 to 43 Volts

Power: 200 mWatts

RoHS Device

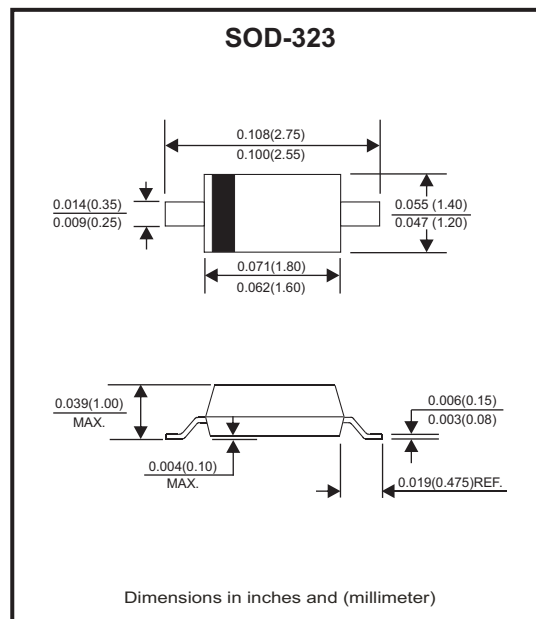


Features

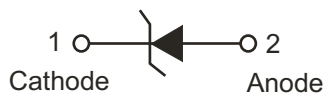
- 200mW power dissipation on ceramic PCB
- General purpose, medium current
- Ideally suited for automated assembly processes
- Available in lead free version

Mechanical data

- Case: SOD-323, Molded plastic.
- Terminals: Solder Plated, solderable per MIL-STD-750, method 2026.
- Polarity: Cathode band.
- Weight: 0.004 grams(approx.).



Circuit Diagram



Maximum Ratings (@Ta=25°C unless otherwise specified)

Parameter	Conditions	Symbol	Value	Unit
Forward voltage (Note 2)	I _F =10mA	V _F	0.9	V
Power dissipation (Note 1)		P _D	200	mW
Thermal resistance	Junction to ambient	R _{θJA}	625	°C/W
Junction temperature		T _J	150	°C
Storage temperature range		T _{STG}	-55 to +150	°C

Notes:

1. Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm².
2. Short duration test pulse used to minimize self-heating effect.

Electrical Characteristics (@Ta=25°C unless otherwise specified)

Part No.	Zener Voltage Range (Note 2)				Max. Zener Impedance f = 1kHz			Max. Reverse Current (Note 2)		Marking Code
	Vz @ IzT (V)			IzT	ZzT @ IzT	Zzk @ Izk	Izk	Ir @ Vr		
	Nom.	Min.	Max.	mA	Ω	Ω	mA	μA	V	
CZRV52C2V4S-G	2.4	2.2	2.6	5	100	600	1.0	50.0	1.0	WX
CZRV52C2V7S-G	2.7	2.5	2.9	5	100	600	1.0	20.0	1.0	W1
CZRV52C3V0S-G	3.0	2.8	3.2	5	95	600	1.0	10.0	1.0	W2
CZRV52C3V3S-G	3.3	3.1	3.5	5	95	600	1.0	5.0	1.0	W3
CZRV52C3V6S-G	3.6	3.4	3.8	5	90	600	1.0	5.0	1.0	W4
CZRV52C3V9S-G	3.9	3.7	4.1	5	90	600	1.0	3.0	1.0	W5
CZRV52C4V3S-G	4.3	4.0	4.6	5	90	600	1.0	3.0	1.0	W6
CZRV52C4V7S-G	4.7	4.4	5.0	5	80	500	1.0	3.0	2.0	W7
CZRV52C5V1S-G	5.1	4.8	5.4	5	60	480	1.0	2.0	2.0	W8
CZRV52C5V6S-G	5.6	5.2	6.0	5	40	400	1.0	1.0	2.0	W9
CZRV52C6V2S-G	6.2	5.8	6.6	5	10	150	1.0	3.0	4.0	WA
CZRV52C6V8S-G	6.8	6.4	7.2	5	15	80	1.0	2.0	4.0	WB
CZRV52C7V5S-G	7.5	7.0	7.9	5	15	80	1.0	1.0	5.0	WC
CZRV52C8V2S-G	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	WD
CZRV52C9V1S-G	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	WE
CZRV52C10S-G	10.0	9.4	10.6	5	20	150	1.0	0.2	7.0	WF
CZRV52C11S-G	11.0	10.4	11.6	5	20	150	1.0	0.1	8.0	WG
CZRV52C12S-G	12.0	11.4	12.7	5	25	150	1.0	0.1	8.0	WH
CZRV52C13S-G	13.0	12.4	14.1	5	30	170	1.0	0.1	8.0	WI
CZRV52C15S-G	15.0	13.8	15.6	5	30	200	1.0	0.1	10.5	WJ
CZRV52C16S-G	16.0	15.3	17.1	5	40	200	1.0	0.1	11.2	WK
CZRV52C18S-G	18.0	16.8	19.1	5	45	225	1.0	0.1	12.6	WL
CZRV52C20S-G	20.0	18.8	21.2	5	55	225	1.0	0.1	14.0	WM
CZRV52C22S-G	22.0	20.8	23.3	5	55	250	1.0	0.1	15.4	WN
CZRV52C24S-G	24.0	22.8	25.6	5	70	250	1.0	0.1	16.8	WO
CZRV52C27S-G	27.0	25.1	28.9	2	80	300	0.5	0.1	18.9	WP
CZRV52C30S-G	30.0	28.0	32.0	2	80	300	0.5	0.1	21.0	WQ
CZRV52C33S-G	33.0	31.0	35.0	2	80	325	0.5	0.1	23.1	WR
CZRV52C36S-G	36.0	34.0	38.0	2	90	350	0.5	0.1	25.2	WS
CZRV52C39S-G	39.0	37.0	41.0	2	130	350	0.5	0.1	27.3	WT
CZRV52C43S-G	43.0	40.0	46.0	2	100	700	1.0	0.1	32.0	WU

Notes:

1. Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm².
2. Short duration test pulse used to minimize self-heating effect.

Company reserves the right to improve product design , functions and reliability without notice.

REV:A

RATING AND CHARACTERISTIC CURVES (CZRV52C2V4S-G Thru. CZRV52C43S-G)

Fig.1 - Zener Characteristics (V_z Up to 10V)

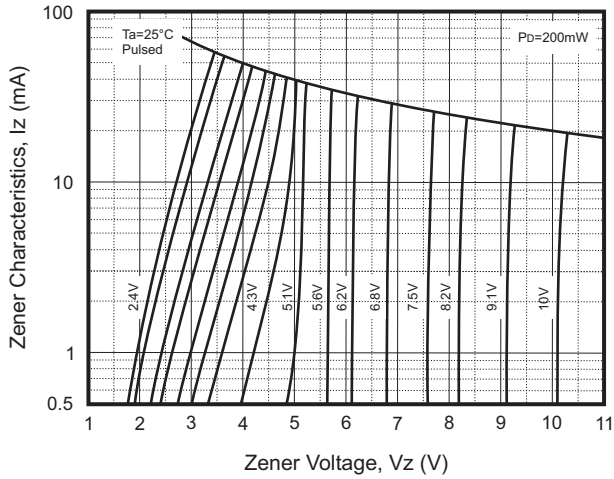


Fig.1 - Zener Characteristics (11V to 43V)

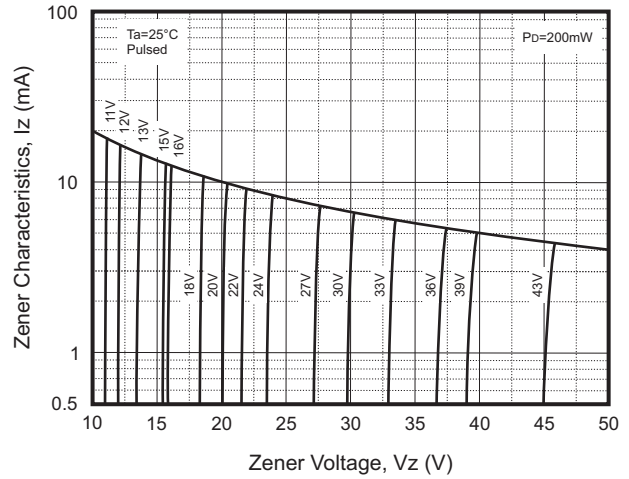


Fig.3 - Typical Capacitance

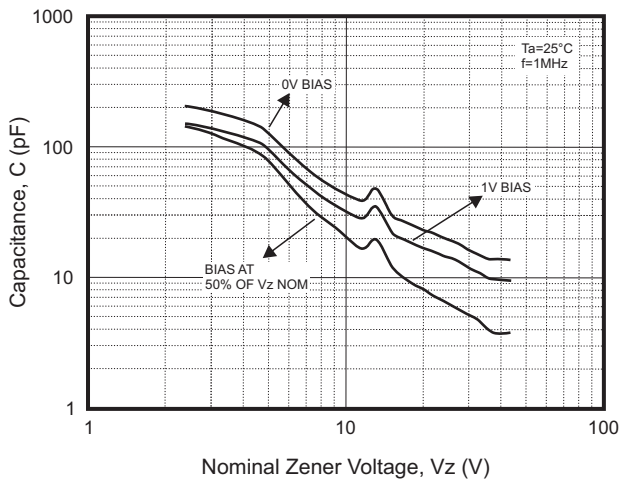


Fig.4 - Effect of Zener Voltage on Zener Impedance

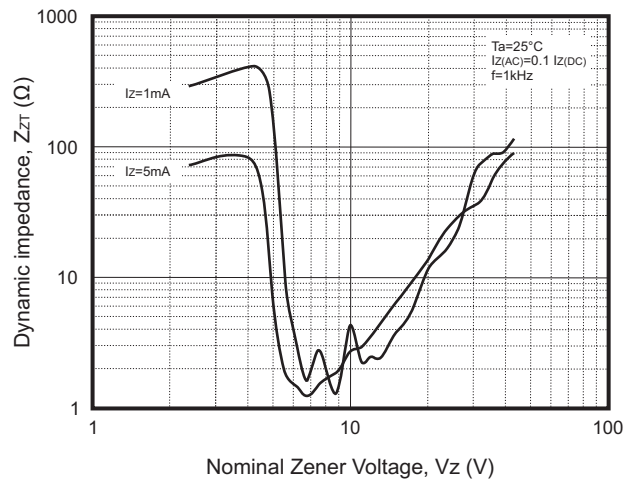
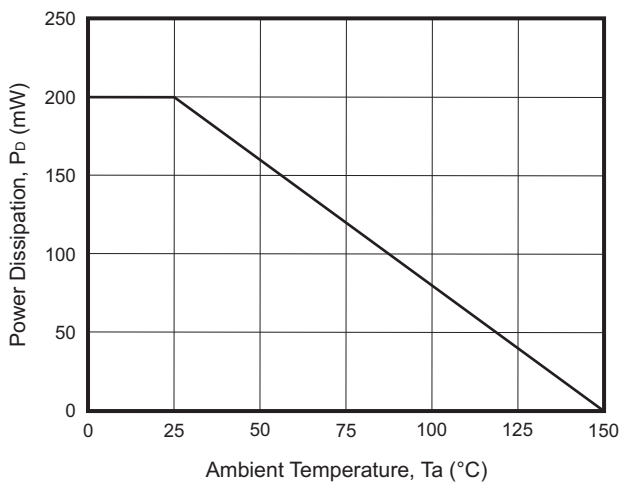


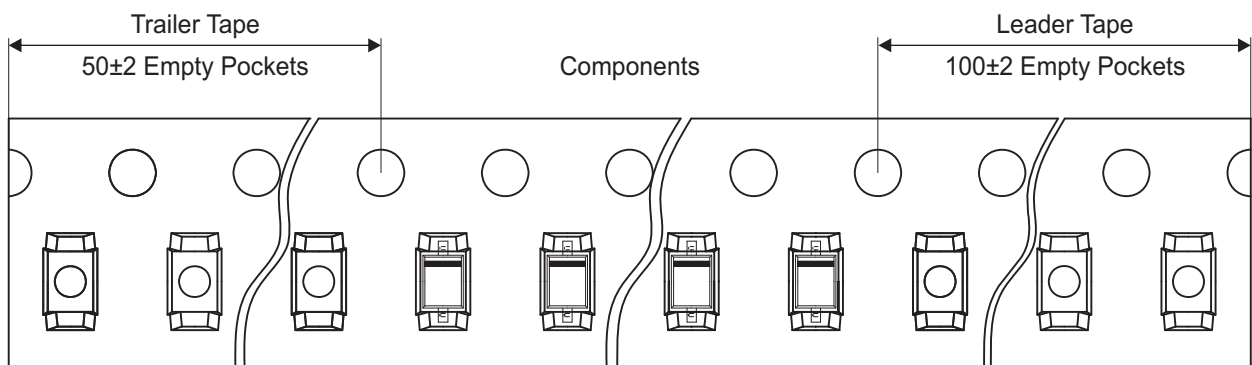
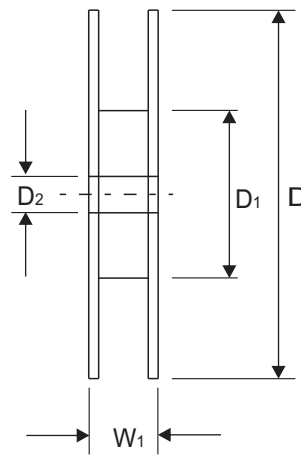
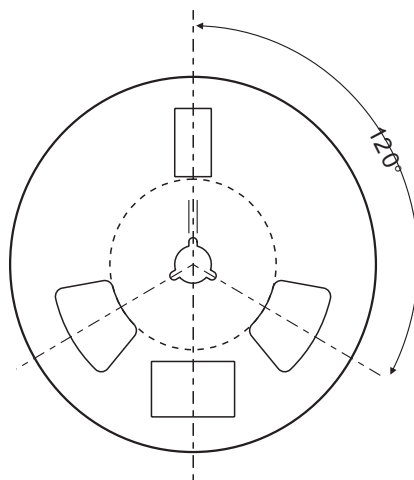
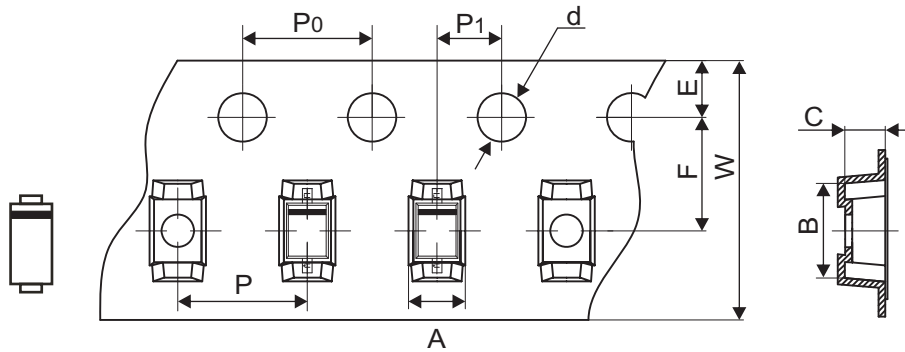
Fig.5 - Power Derating Curve



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Reel Taping Specification



SOD-323	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	1.46 ± 0.10	2.90 ± 0.10	1.25 ± 0.10	1.50 + 0.10 - 0	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.057 ± 0.004	0.114 ± 0.004	0.049 ± 0.004	0.059 + 0.004 - 0	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039
SOD-323	SYMBOL	E	F	P	P ₀	P ₁	W	W ₁
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 + 0.30 - 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.315 + 0.012 - 0.004	0.484 ± 0.039

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REV:A

Marking Code

Part Number	Marking Code
CZRV52C2V4S-G ~ CZRV52C43S-G	XX

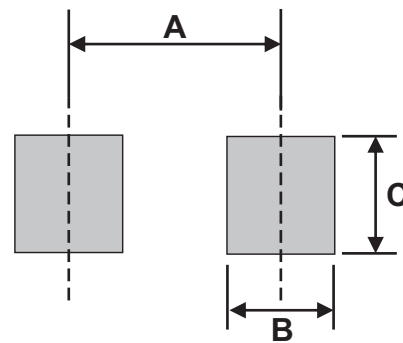


XX = Product type marking code (See page.2)

┃ = The marking bar indicates the cathode.

Suggested PAD Layout

SIZE	SOD-323	
	(mm)	(inch)
A	2.15	0.085
B	0.70	0.028
C	0.70	0.028



Note:

- 1.General tolerance: $\pm 0.05\text{mm}$.
- 2.The pad layout is for reference purposes only.

Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-323	3,000	7