

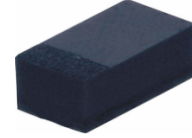
CZRQR2V4B-HF Thru. CZRQR39VB-HF

Voltage 2.4 to 39 Volts

Power 125 mWatts

RoHS Device

Halogen Free

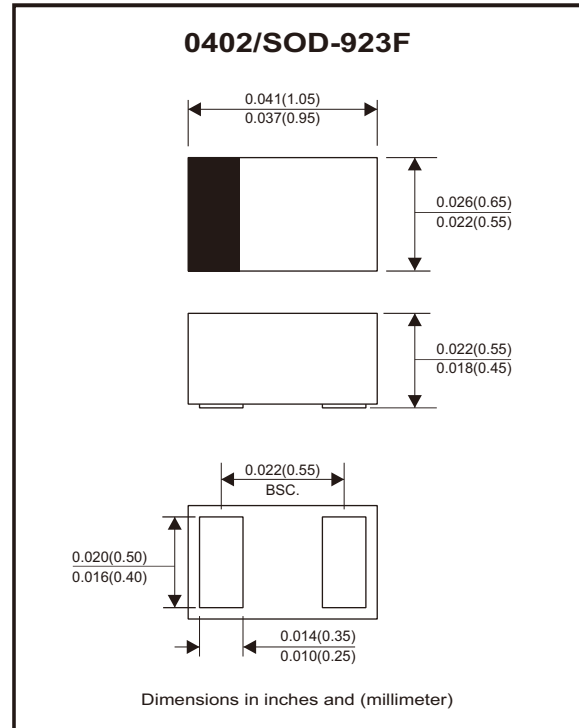


Features

- 125mW power dissipation.
- High voltages from 2.4 ~ 39 V.
- Designed for mounting on small surface.
- Extremely thin/leadless package.
- Constant voltage control.

Mechanical data

- Case: 0402/SOD-923F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Weight: 0.001 grams (approx.).



Circuit Diagram



Maximum Rating and Electrical Characteristics

Parameter	Symbol	Value	Unit
Maximum forward voltage drop at $I_F = 10\text{mA}$	V_F	0.9	V
Maximum power dissipation at 25°C	P_D	125	mW
Forward current, surge peak 8.3 ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	2.0	A
Peak ESD voltage capability (IEC 61000-4-2)	V_{PV}	8	kV
Operating junction and storage temperature range	T_J	-55 to +125	°C

Electrical Characteristics (at Ta = 25°C unless otherwise noted)

Part Number	Marking Code	Zener Voltage			Operating resistance		Rising operating Resistance		Reverse current	
		Vz (V)			ZzT (Ohm)		Zzk (Ohm)		IR (µA)	
		Min	Max	Iz (mA)	Max	Iz (mA)	Max	Iz (mA)	Max	VR (V)
CZRQR2V4B-HF	U2	2.34	2.46	5	100	5	1800	0.25	100	1
CZRQR2V7B-HF	U3	2.63	2.77	5	100	5	1900	0.25	75	1
CZRQR3V0B-HF	U4	2.93	3.08	5	95	5	2000	0.25	50	1
CZRQR3V3B-HF	U5	3.22	3.38	5	95	5	2200	0.25	25	1
CZRQR3V6B-HF	U6	3.51	3.69	5	90	5	2300	0.25	15	1
CZRQR3V9B-HF	U7	3.80	4.00	5	90	5	2400	0.25	10	1
CZRQR4V3B-HF	U8	4.19	4.41	5	88	5	2500	0.25	5	1
CZRQR4V7B-HF	U9	4.58	4.82	5	70	5	2200	0.25	3	1.5
CZRQR5V1B-HF	UA	4.97	5.23	5	50	5	2050	0.25	2	2
CZRQR6V2B-HF	UC	6.05	6.36	5	10	5	1300	0.25	1	4
CZRQR6V8B-HF	UE	6.63	6.97	5	8	5	750	0.25	1	5.2
CZRQR7V5B-HF	UF	7.31	7.69	5	7	5	600	0.25	0.5	6
CZRQR8V2B-HF	UG	8.00	8.41	5	7	5	600	0.25	0.5	6.5
CZRQR9V1B-HF	UH	8.87	9.33	5	10	5	600	0.25	0.1	7
CZRQR10VB-HF	UJ	9.75	10.25	5	15	5	600	0.25	0.1	8
CZRQR11VB-HF	UK	10.73	11.27	5	18	5	600	0.25	0.1	8.4
CZRQR12VB-HF	UM	11.70	12.30	5	22	5	600	0.25	0.1	9.1
CZRQR13VB-HF	UN	12.68	13.32	5	25	5	600	0.25	0.1	9.9
CZRQR15VB-HF	UP	14.63	15.37	5	32	5	600	0.25	0.1	11
CZRQR16VB-HF	UQ	15.60	16.40	5	36	5	600	0.25	0.1	12
CZRQR18VB-HF	UR	17.55	18.45	5	42	5	600	0.25	0.1	14
CZRQR20VB-HF	US	19.50	20.50	5	48	5	600	0.25	0.1	15
CZRQR22VB-HF	UT	21.45	22.55	5	55	5	600	0.25	0.1	17
CZRQR24VB-HF	UU	23.40	24.60	5	62	5	600	0.25	0.1	18
CZRQR27VB-HF	UV	26.33	27.67	5	70	5	600	0.25	0.1	21
CZRQR30VB-HF	UW	29.25	30.75	5	78	5	600	0.25	0.1	23
CZRQR33VB-HF	UX	32.18	33.82	5	88	5	700	0.25	0.1	25
CZRQR36VB-HF	UY	35.10	36.90	5	95	5	700	0.25	0.1	27
CZRQR39VB-HF	UZ	38.03	39.97	5	130	5	800	0.25	0.1	30

Rating and Characteristic Curves (CZRQR2V4B-HF Thru. CZRQR39VB-HF)

Fig.1 - Zener Voltage Characteristics

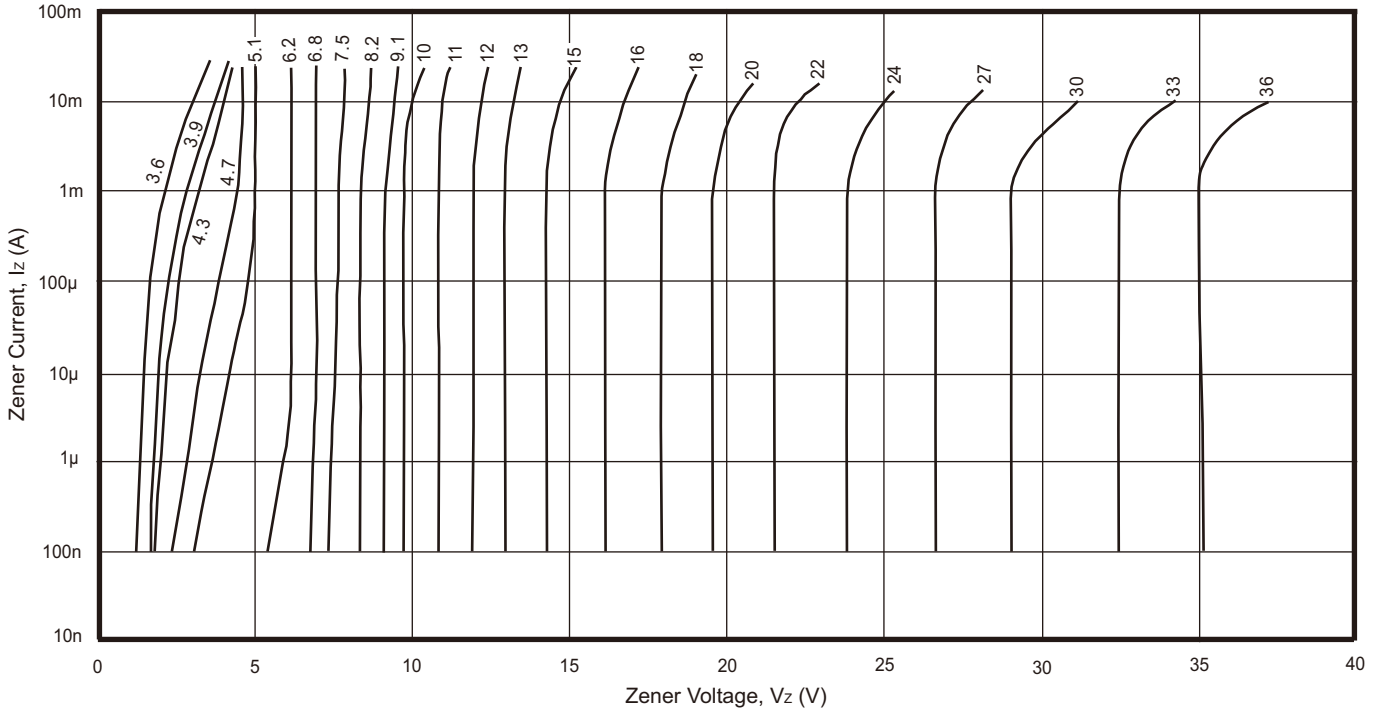


Fig.2 - Derating Curve

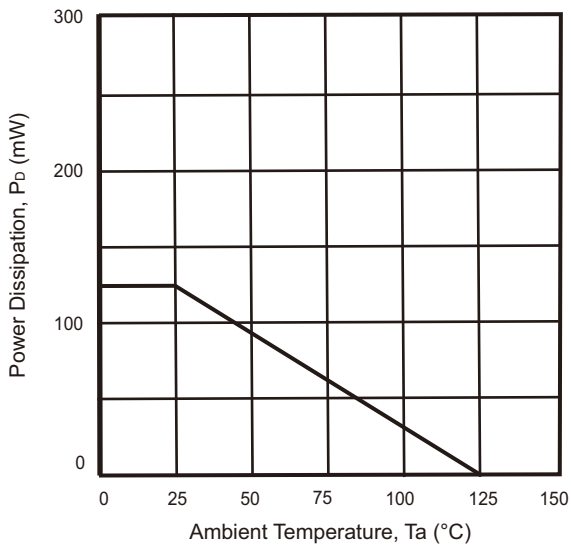
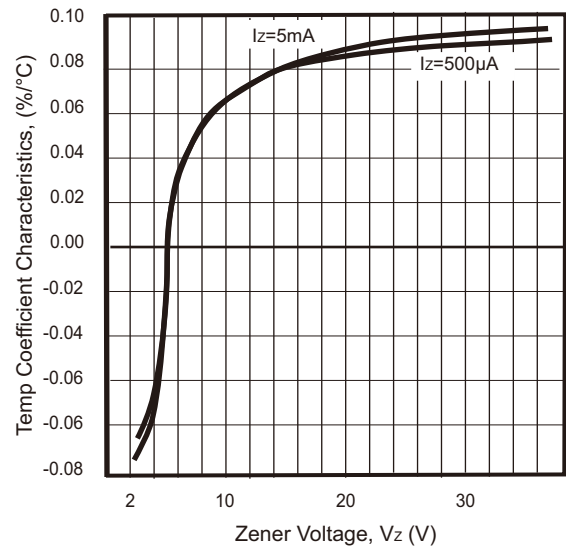
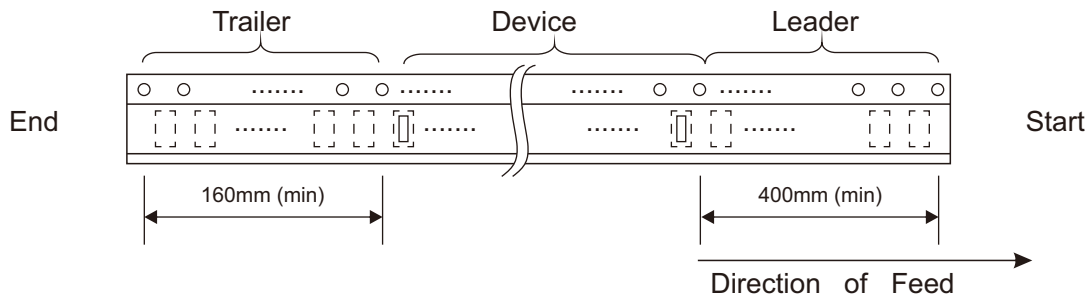
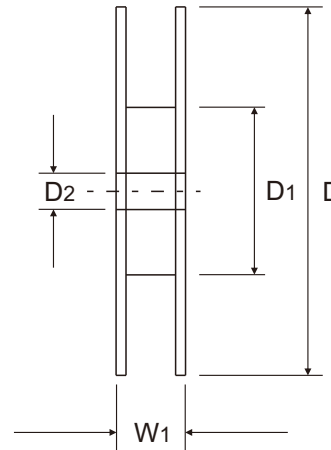
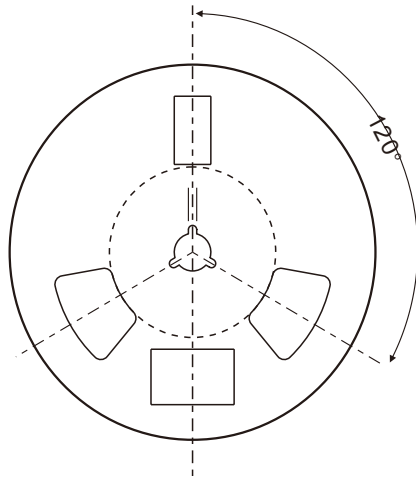
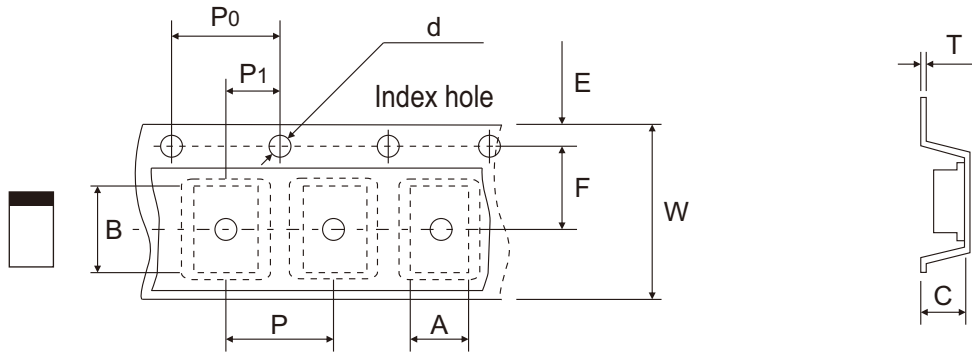


Fig.3 - Zener Voltage-Temp Coefficient Characteristics



Reel Taping Specification



0402 (SOD-923F)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.75 ± 0.05	1.17 ± 0.05	0.65 ± 0.05	1.50 + 0.10 - 0.00	178.00 ± 1.00	60.00 ± 0.50	13.50 ± 0.20
	(inch)	0.030 ± 0.002	0.046 ± 0.002	0.026 ± 0.002	0.059 + 0.004 - 0.000	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

0402 (SOD-923F)	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.20 + 0.02 - 0.05	8.00 ± 0.20	12.00 + 0.50 - 0.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.008 + 0.001 - 0.002	0.315 ± 0.008	0.472 + 0.020 - 0.000

Marking Code

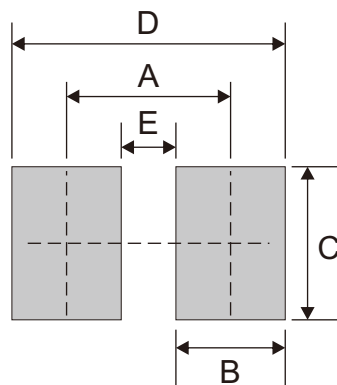
Part Number	Marking Code
CZRQR2V4B-HF Thru. CZRQR39VB-HF	See Page 2



XX = Marking code
 █ = Cathode band

Suggested P.C.B. PAD Layout

SIZE	0402/SOD-923F	
	(mm)	(inch)
A	0.750	0.030
B	0.500	0.020
C	0.700	0.028
D	1.250	0.049
E	0.250	0.010



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
0402/SOD-923F	5,000	7