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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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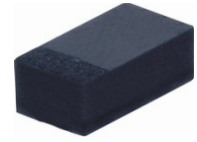
## CZRER52C2-HF Thru CZRER52C39-HF

Voltage 2 to 39 Volts

Power 150 mWatts

RoHS Device

Halogen free

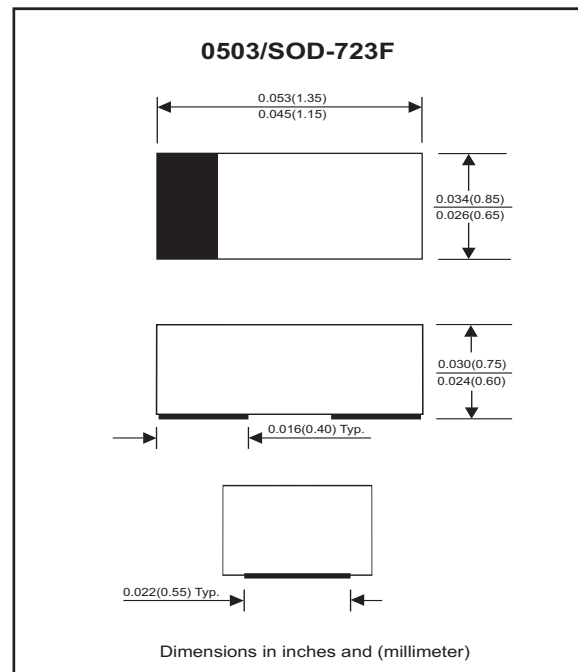


### Features

- 150mW Power Dissipation.
- High Voltages from 2 ~ 39 V.
- Designed for mounting on small surface.
- Extremely thin/leadless package.
- Pb free product.

### Mechanical data

- Case: 0503/SOD-723F Standard package  
Molded plastic.
- Terminals: Gold plated, solderable per  
MIL-STD-750,method 2026.
- Polarity: Indicated by cathode band.
- Weight: 0.002 gram(approx.).



### 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 $25 \text{ C}^\circ$	$P_D$	150	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	$^\circ\text{C}$

## Electrical Characteristics (TA=25°C)

Part Number	Marking Code	Zener Voltage			Operating resistance		Rising operating Resistance		Reverse current	
		V <sub>Z</sub> (V)			ZZT(Ohm)		ZZK(Ohm)		IR(μA)	
		Min	Max	I <sub>Z</sub> (mA)	Max	I <sub>Z</sub> (mA)	Max	I <sub>Z</sub> (mA)	Max	V <sub>R</sub> (V)
CZRER52C2-HF	Z0	1.90	2.10	5	100	5	600	1	100	1
CZRER52C2V2-HF	Z1	2.09	2.31	5	100	5	600	1	100	1
CZRER52C2V4-HF	Z2	2.28	2.52	5	85	5	600	1	100	1
CZRER52C2V7-HF	Z3	2.57	2.84	5	83	5	500	1	75	1
CZRER52C3-HF	Z4	2.85	3.15	5	95	5	500	1	50	1
CZRER52C3V3-HF	Z5	3.14	3.47	5	95	5	500	1	25	1
CZRER52C3V6-HF	Z6	3.42	3.78	5	95	5	500	1	15	1
CZRER52C3V9-HF	Z7	3.71	4.10	5	95	5	500	1	10	1
CZRER52C4V3-HF	Z8	4.09	4.52	5	95	5	500	1	5	1
CZRER52C4V7-HF	Z9	4.47	4.94	5	78	5	500	1	5	2
CZRER52C5V1-HF	ZA	4.85	5.36	5	60	5	480	1	0.1	0.8
CZRER52C5V6-HF	ZB	5.32	5.88	5	40	5	400	1	0.1	1
CZRER52C6V2-HF	ZC	5.89	6.51	5	10	5	200	1	0.1	2
CZRER52C6V8-HF	ZE	6.46	7.14	5	8	5	150	1	0.1	3
CZRER52C7V5-HF	ZF	7.13	7.88	5	7	5	50	1	0.1	5
CZRER52C8V2-HF	ZG	7.79	8.61	5	7	5	50	1	0.1	6
CZRER52C9V1-HF	ZH	8.65	9.56	5	10	5	50	1	0.1	7
CZRER52C10-HF	ZJ	9.50	10.50	5	15	5	70	1	0.1	7.5
CZRER52C11-HF	ZK	10.45	11.55	5	20	5	70	1	0.1	8.5
CZRER52C12-HF	ZM	11.40	12.60	5	20	5	90	1	0.1	9
CZRER52C13-HF	ZN	12.35	13.65	5	25	5	110	1	0.1	10
CZRER52C15-HF	ZP	14.25	15.75	5	30	5	110	1	0.1	11
CZRER52C16-HF	ZQ	15.20	16.80	5	40	5	170	1	0.1	12
CZRER52C18-HF	ZR	17.10	18.90	5	50	5	170	1	0.1	14
CZRER52C20-HF	ZS	19.00	21.00	5	50	5	220	1	0.1	15
CZRER52C22-HF	ZT	20.90	23.10	5	55	5	220	1	0.1	17
CZRER52C24-HF	ZU	22.80	25.20	5	80	5	220	1	0.1	18
CZRER52C27-HF	ZV	25.65	28.35	5	80	5	250	1	0.1	20
CZRER52C30-HF	ZW	28.50	31.50	5	80	5	250	1	0.1	23
CZRER52C33-HF	ZX	31.35	34.65	5	80	5	250	1	0.1	25
CZRER52C36-HF	ZY	34.20	37.80	5	90	5	250	1	0.1	27
CZRER52C39-HF	ZZ	37.05	40.95	5	90	5	300	1	0.1	29

## RATING AND CHARACTERISTIC CURVES (CZRER52C2-HF Thru CZRER52C39-HF)

Fig.1 TEMPERATURE COEFFICIENTS

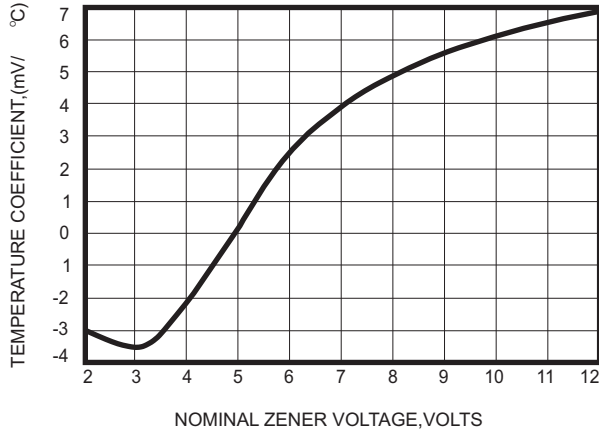


Fig.2 TEMPERATURE COEFFICIENTS

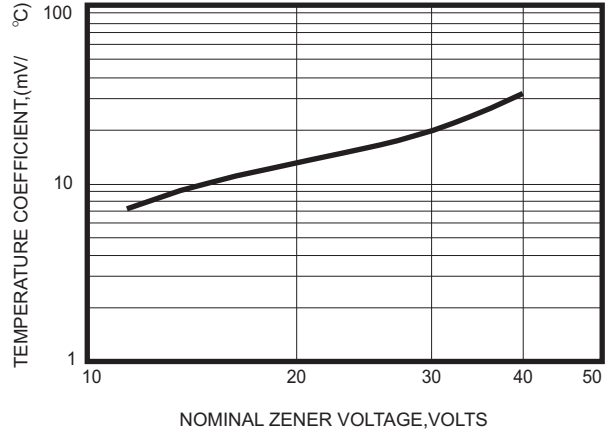


Fig.3 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

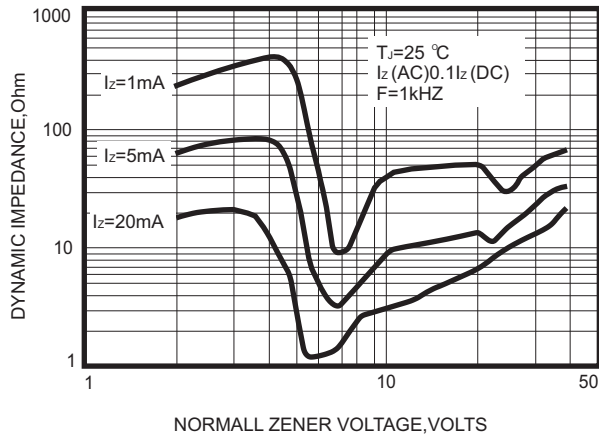


Fig.4 TYPICAL FORWARD VOLTAGE

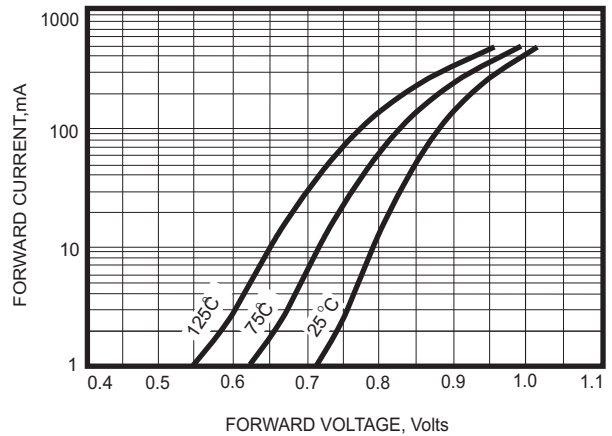


Fig.5 TYPICAL LEAKAGE CURRENT

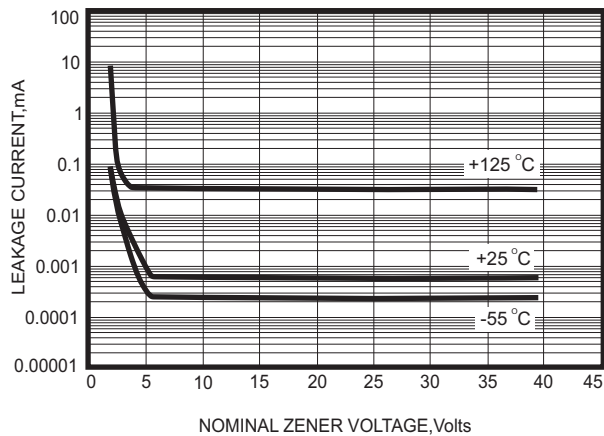
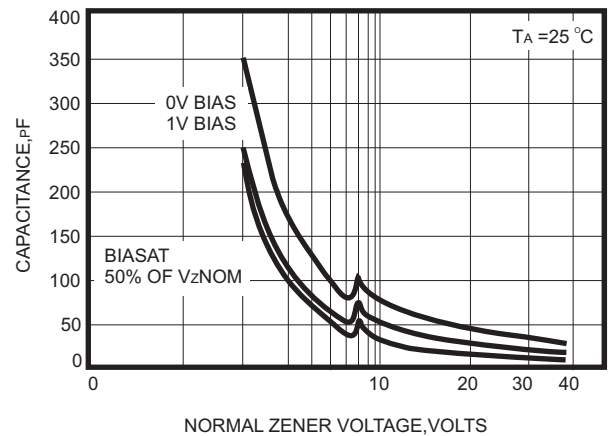


Fig.6 TYPICAL CAPACITANCE



## RATING AND CHARACTERISTIC CURVES (CZRER52C2-HF Thru CZRER52C39-HF)

Fig.7 ZENER VOLTAGE VERSUS ZENER CURRENT

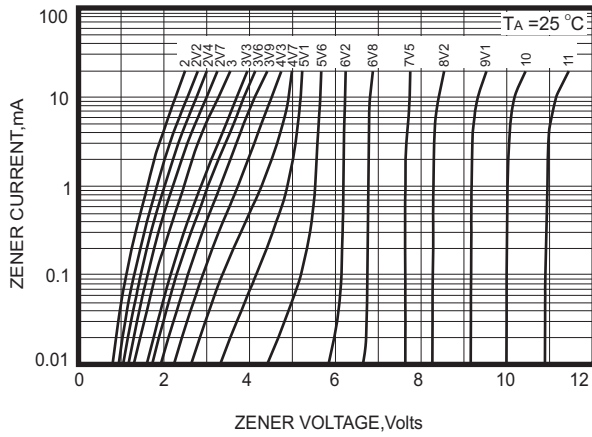


Fig.8 ZENER VOLTAGE VERSUS ZENER CURRENT

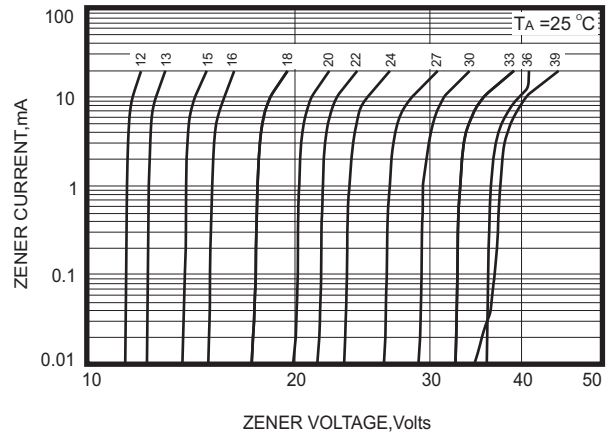
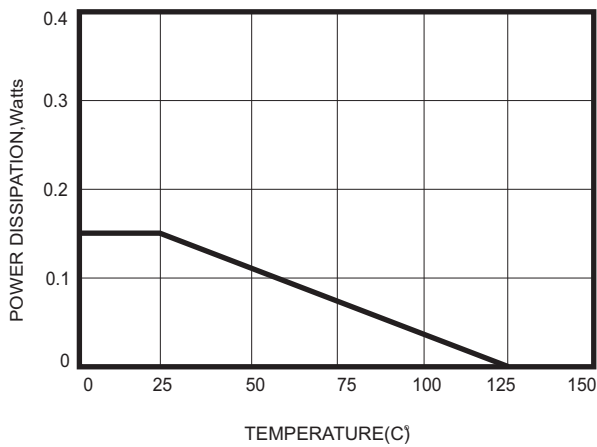
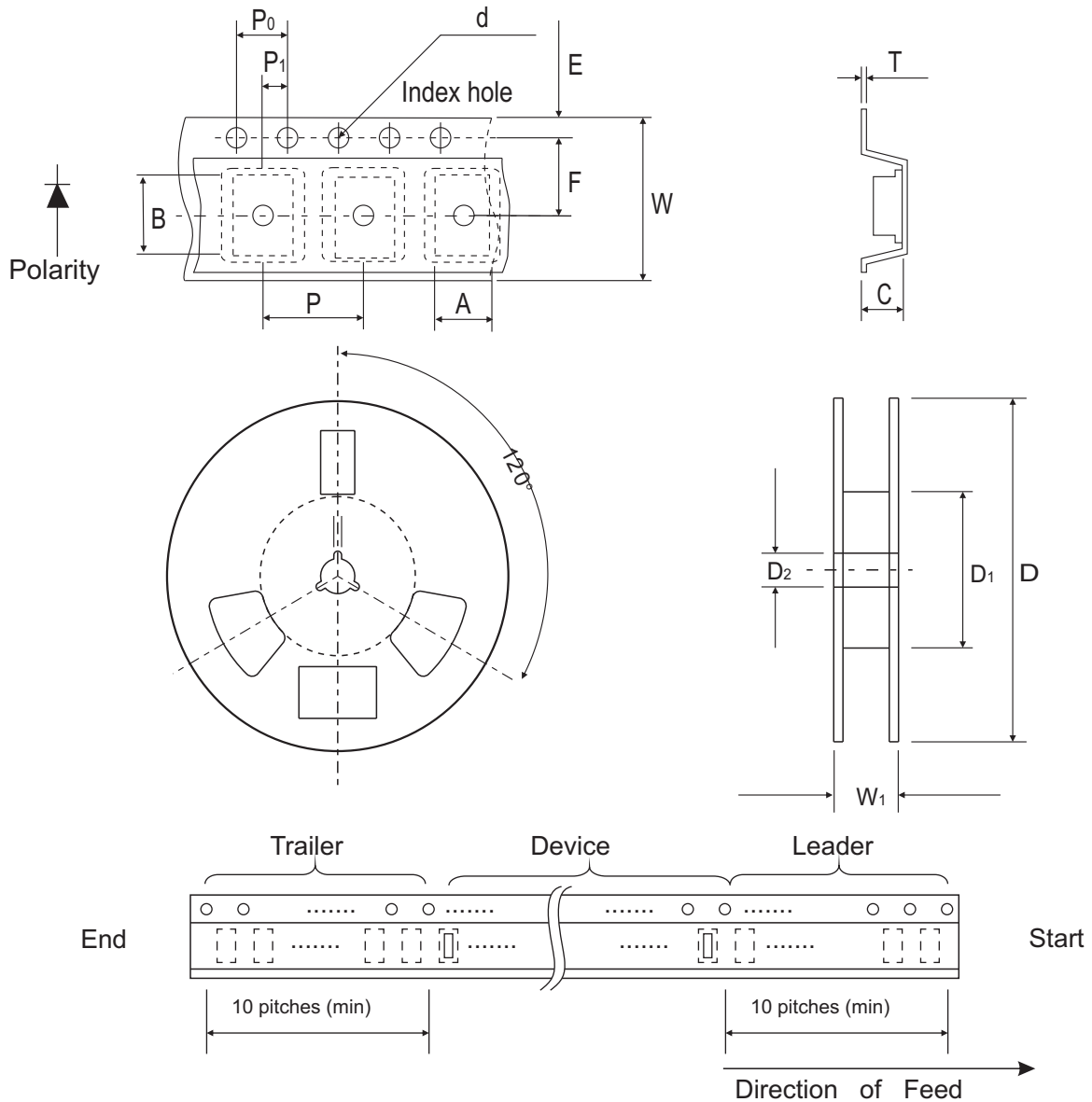


Fig.9 STEADY STATE POWER DERATING



## Reel Taping Specification

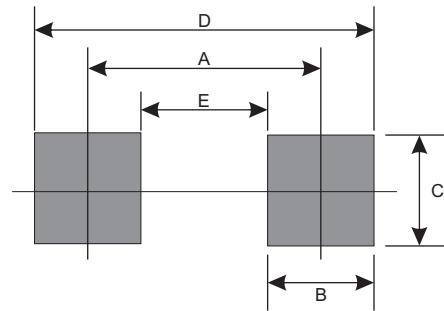


0503 (SOD-723F)	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	0.90 ± 0.10	1.46 ± 0.10	0.80 ± 0.10	1.55 ± 0.05	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.035 ± 0.004	0.057 ± 0.004	0.031 ± 0.004	0.061 ± 0.002	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

0503 (SOD-723F)	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	T	W	W <sub>1</sub>
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.22 ± 0.05	8.00 ± 0.20	13.5 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.008 ± 0.002	0.315 ± 0.008	0.531 MAX.

## Suggested PAD Layout

SIZE	0503/SOD-723F	
	(mm)	(inch)
A	0.85	0.033
B	0.55	0.022
C	0.85	0.033
D	1.40	0.055
E	0.30	0.012



## Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
0503/SOD-723F	4000	7