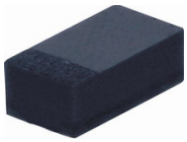
CZRQR52C2 Thru CZRQR52C39

Voltage 2 to 39 Volts
Power 125 mWatts
RoHS Device



Features

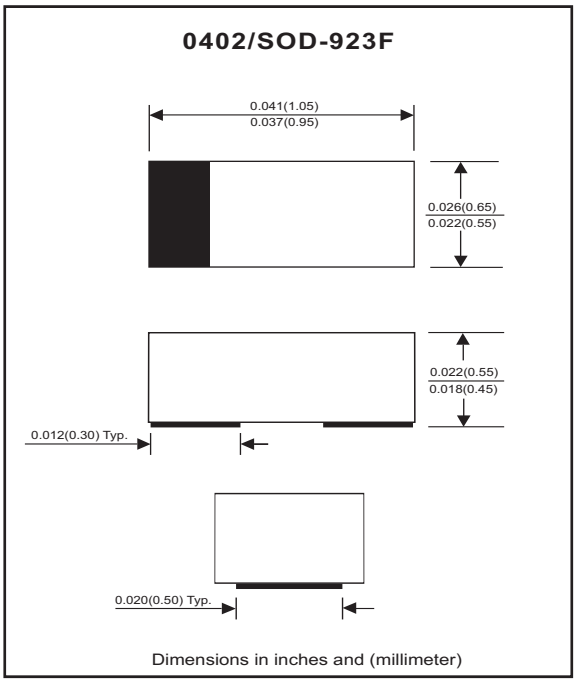
-125mW Power Dissipation.

-High Voltages from 2 ~ 39 V.

-Designed for mounting on small surface.

-Extremely thin/leadless package.

-Pb free product.



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 gram(approx.).

Maximum Rating AND Electrical Characteristics

Parameter	Symbol	Value	Unit
Maximum Forward Voltage Drop at I_F = 10 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 (T_A=25 °C)

Part Number	Marking Code	Zener Voltage			Operating resistance		Rising operating Resistance		Reverse current	
		V_Z(V)			ZZT(Ohm)		ZZK(Ohm)		IR(uA)	
		Min	Max	I_Z(mA)	Max	I_Z(mA)	Max	I_Z(mA)	Max	V_R(V)
CZRQR52C2	Z0	1.90	2.10	5	100	5	600	1	100	1
CZRQR52C2V2	Z1	2.09	2.31	5	100	5	600	1	100	1
CZRQR52C2V4	Z2	2.28	2.52	5	85	5	600	1	100	1
CZRQR52C2V7	Z3	2.57	2.84	5	83	5	500	1	75	1
CZRQR52C3	Z4	2.85	3.15	5	95	5	500	1	50	1
CZRQR52C3V3	Z5	3.14	3.47	5	95	5	500	1	25	1
CZRQR52C3V6	Z6	3.42	3.78	5	95	5	500	1	15	1
CZRQR52C3V9	Z7	3.71	4.10	5	95	5	500	1	10	1
CZRQR52C4V3	Z8	4.09	4.52	5	95	5	500	1	5	1
CZRQR52C4V7	Z9	4.47	4.94	5	78	5	500	1	5	2
CZRQR52C5V1	ZA	4.85	5.36	5	60	5	480	1	0.1	0.8
CZRQR52C5V6	ZB	5.32	5.88	5	40	5	400	1	0.1	1
CZRQR52C6V2	ZC	5.89	6.51	5	10	5	200	1	0.1	2
CZRQR52C6V8	ZE	6.46	7.14	5	8	5	150	1	0.1	3
CZRQR52C7V5	ZF	7.13	7.88	5	7	5	50	1	0.1	5
CZRQR52C8V2	ZG	7.79	8.61	5	7	5	50	1	0.1	6
CZRQR52C9V1	ZH	8.65	9.56	5	10	5	50	1	0.1	7
CZRQR52C10	ZJ	9.50	10.50	5	15	5	70	1	0.1	7.5
CZRQR52C11	ZK	10.45	11.55	5	20	5	70	1	0.1	8.5
CZRQR52C12	ZM	11.40	12.60	5	20	5	90	1	0.1	9
CZRQR52C13	ZN	12.35	13.65	5	25	5	110	1	0.1	10
CZRQR52C15	ZP	14.25	15.75	5	30	5	110	1	0.1	11
CZRQR52C16	ZQ	15.20	16.80	5	40	5	170	1	0.1	12
CZRQR52C18	ZR	17.10	18.90	5	50	5	170	1	0.1	14
CZRQR52C20	ZS	19.00	21.00	5	50	5	220	1	0.1	15
CZRQR52C22	ZT	20.90	23.10	5	55	5	220	1	0.1	17
CZRQR52C24	ZU	22.80	25.20	5	80	5	220	1	0.1	18
CZRQR52C27	ZV	25.65	28.35	5	80	5	250	1	0.1	20
CZRQR52C30	ZW	28.50	31.50	5	80	5	250	1	0.1	23
CZRQR52C33	ZX	31.35	34.65	5	80	5	250	1	0.1	25
CZRQR52C36	ZY	34.20	37.80	5	90	5	250	1	0.1	27
CZRQR52C39	ZZ	37.05	40.95	5	90	5	300	1	0.1	29

RATING AND CHARACTERISTIC CURVES (CZRQR52C2 Thru CZRQR52C39)

Fig.1 TEMPERATURE COEFFICENTS

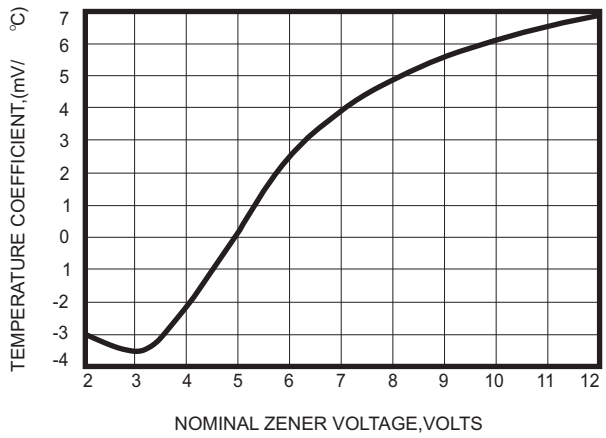


Fig.2 TEMPERATURE COEFFICENTS

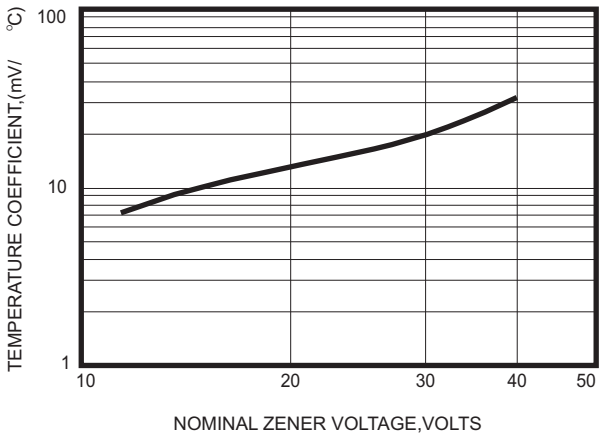


Fig.3 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

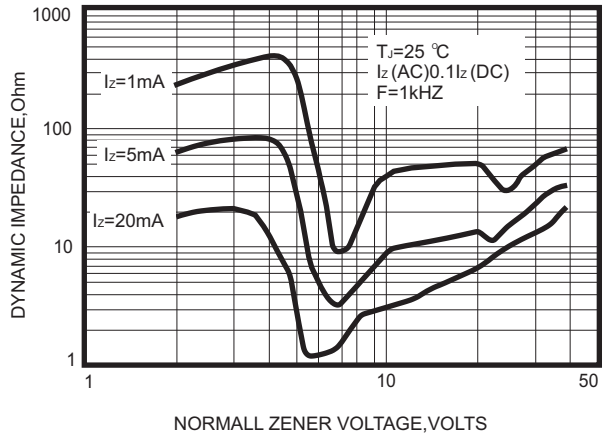


Fig.4 TYPICAL FORWARD VOLTAGE

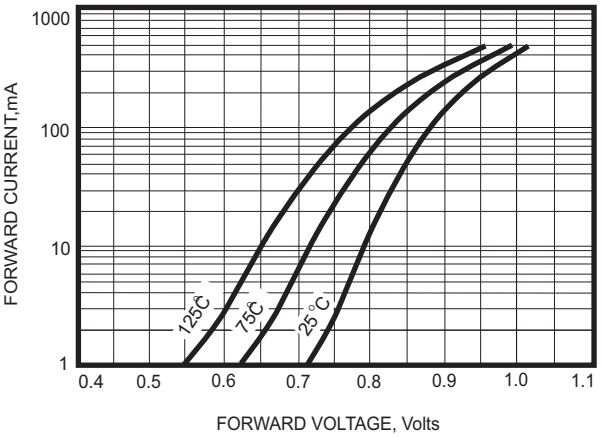


Fig.5 TYPICAL LEAKAGE CURRENT

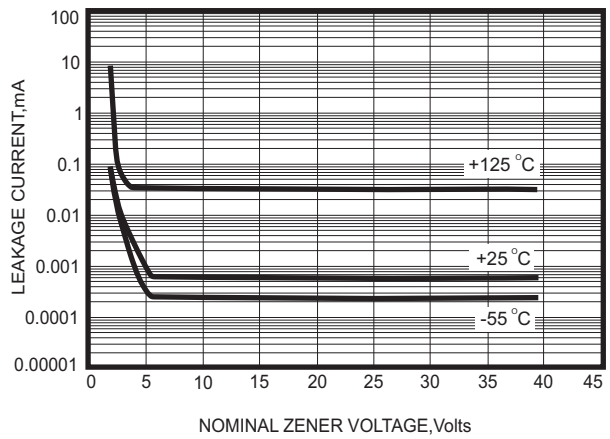
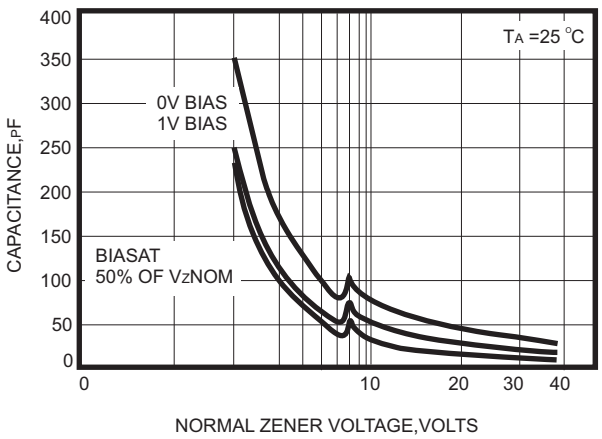


Fig.6 TYPICAL CAPACITANCE



RATING AND CHARACTERISTIC CURVES (CZRQR52C2 Thru CZRQR52C39)

Fig.7 ZENER VOLTAGE VERSUS ZENER CURRENT

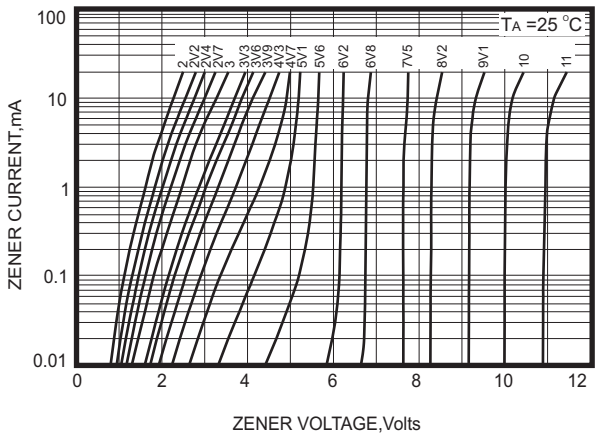


Fig.8 ZENER VOLTAGE VERSUS ZENER CURRENT

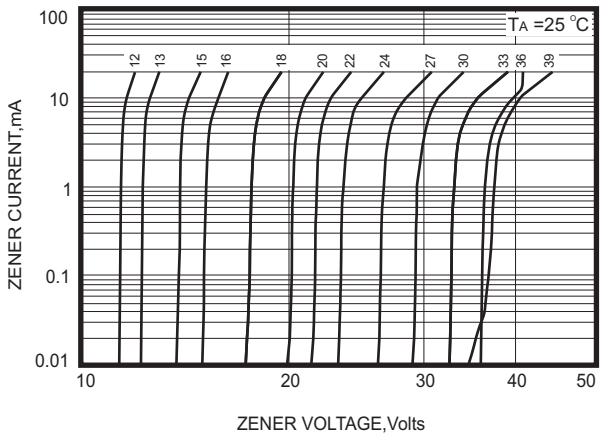
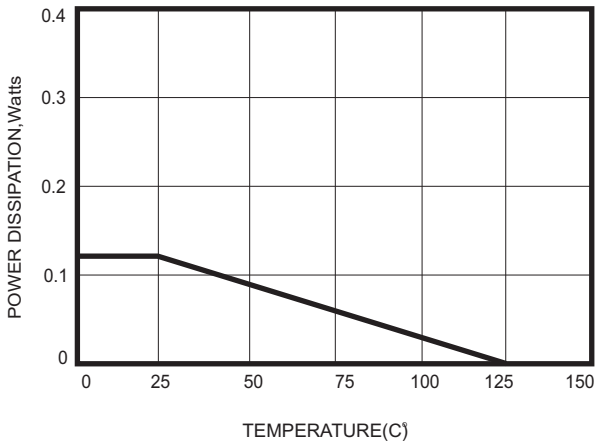
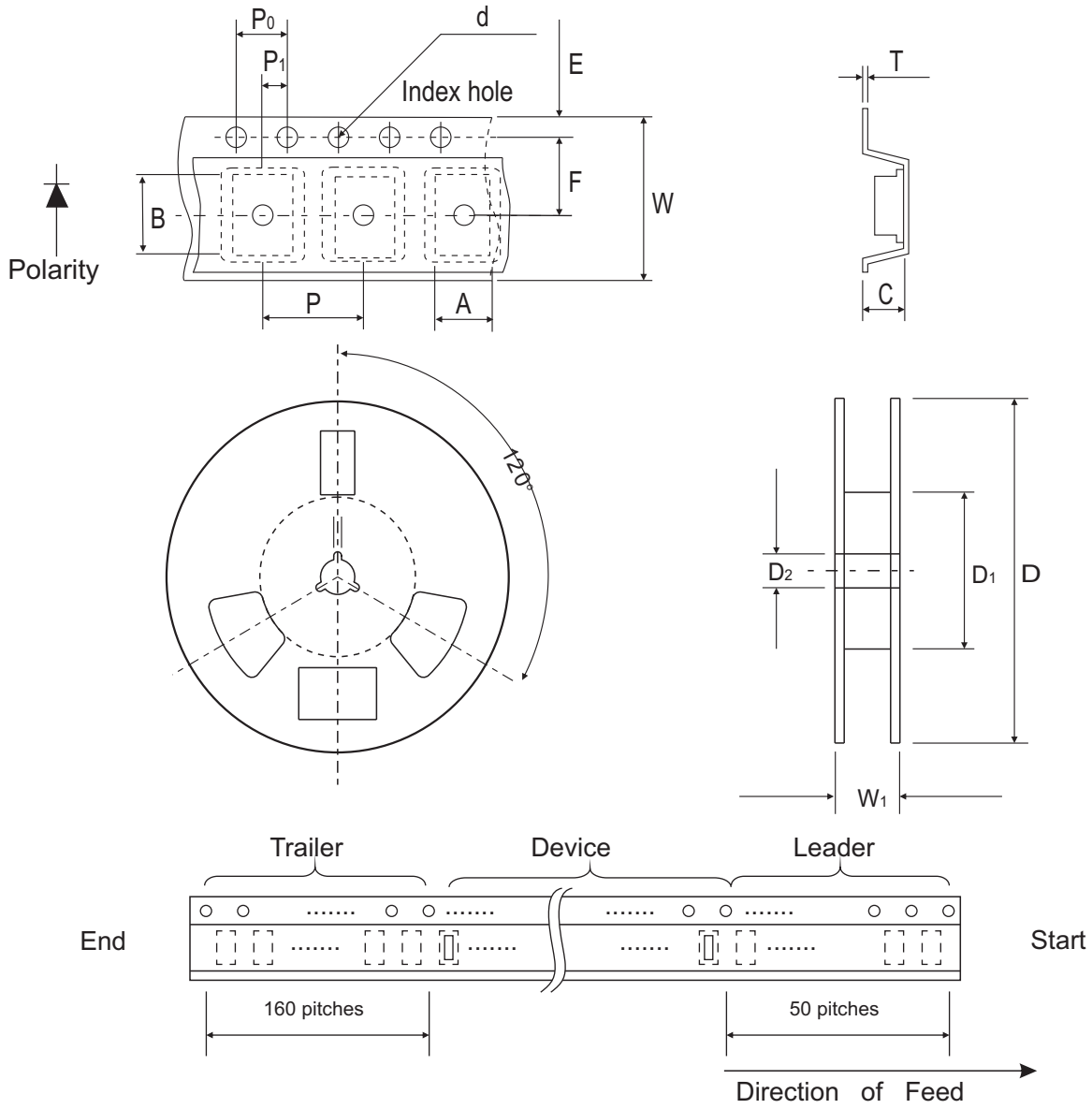


Fig.9 STEADY STATE POWER DERATING



Reel Taping Specification

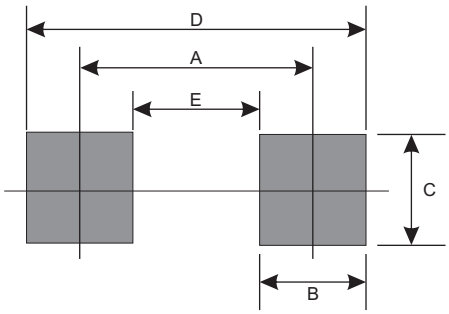


	SYMBOL	A	B	C	d	D	D_1	D_2
0402 (SOD-923F)	(mm)	0.75 ± 0.10	1.15 ± 0.10	0.60 ± 0.10	1.55 ± 0.10	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.030 ± 0.004	0.045 ± 0.004	0.024 ± 0.004	0.061 ± 0.004	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

	SYMBOL	E	F	P	P_0	P_1	T	W	W_1
0402 (SOD-923F)	(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	0.009 ± 0.002	0.315 ± 0.008	0.531 MAX.

Suggested 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 Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
0402/SOD-923F	5000	7