

## Small Signal Product

## Rectifier Diode

### FEATURES

- Surface mount device type
- Moisture sensitivity level 1
- Low leakage current
- Pb free version and RoHS compliant
- Packing code with suffix "G" means green compound (halogen-free)


**SOD-123**


### MECHANICAL DATA

- Case: SOD-123 small outline plastic package
- Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed : 260°C/10s
- Polarity: Indicated by cathode band
- Weight: 9.5mg (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)					
PARAMETER		SYMBOL	2CZ4004	2CZ4005	UNIT
Non-repetitive peak reverse voltage	IR=100μA	V <sub>RM</sub>	400	600	V
Reverse voltage	IR=100μA	V <sub>R</sub>	400	600	V
RMS reverse voltage		V <sub>R(RMS)</sub>	280	420	V
Forward current		I <sub>O</sub>	1		A
Non-repetitive peak forward surge current 8.3ms half sine wave		I <sub>FSM</sub>	7.5		A
Power dissipation		P <sub>d</sub>	350		mW
Forward voltage	I <sub>F</sub> = 1 A	V <sub>F</sub>	1.1		V
Peak reverse current @ rated VR		I <sub>R</sub>	5		μA
Total capacitance	V <sub>R</sub> =4V, f=1.0MHz	C <sub>TOT</sub>	15		pF
Reverse recovery time	IF=0.5A, IR=1A, IRR=0.25A	t <sub>rr</sub>	MIN	MAX	
			1	1.6	μs
Thermal resistance junction to ambient		R <sub>θJA</sub>	357		°C/W
Operating junction temperature range		T <sub>J</sub>	150		°C
Storage Temperature Range		T <sub>STG</sub>	-55 to +150		°C

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RATINGS AND CHARACTERISTICS CURVES

( $T_A=25^\circ\text{C}$  unless otherwise noted)

Fig.1 Typical Forward Characteristics

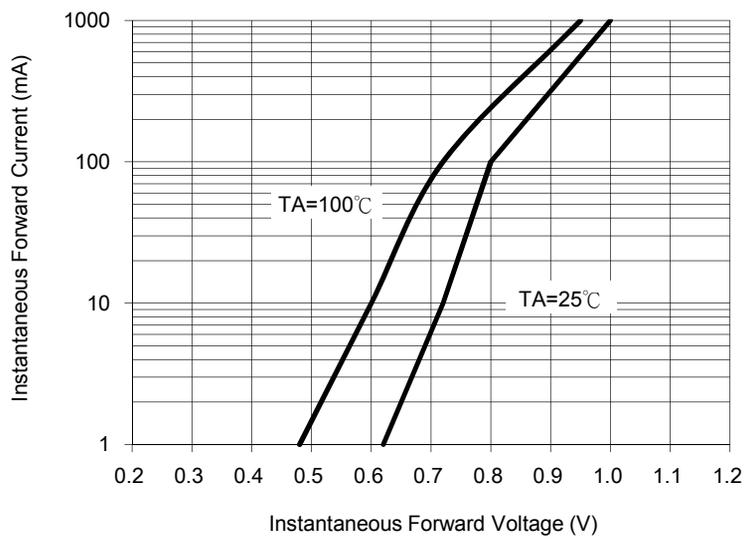


Fig. 2 Reverse Characteristics

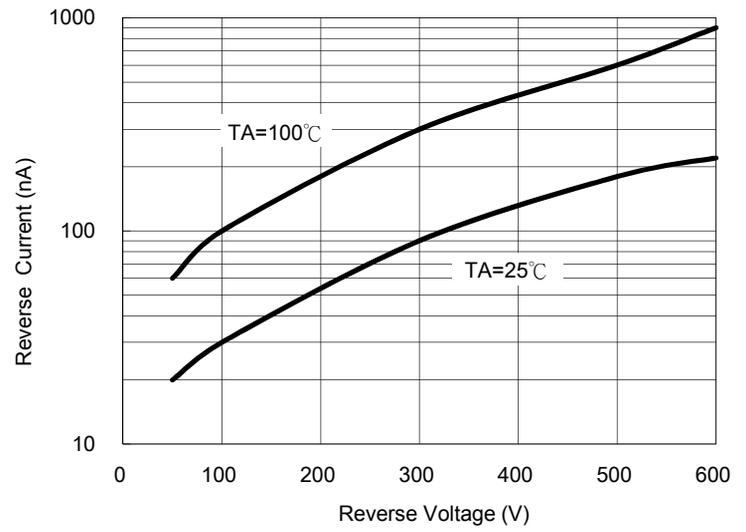


Fig. 3 Capacitance Characteristics

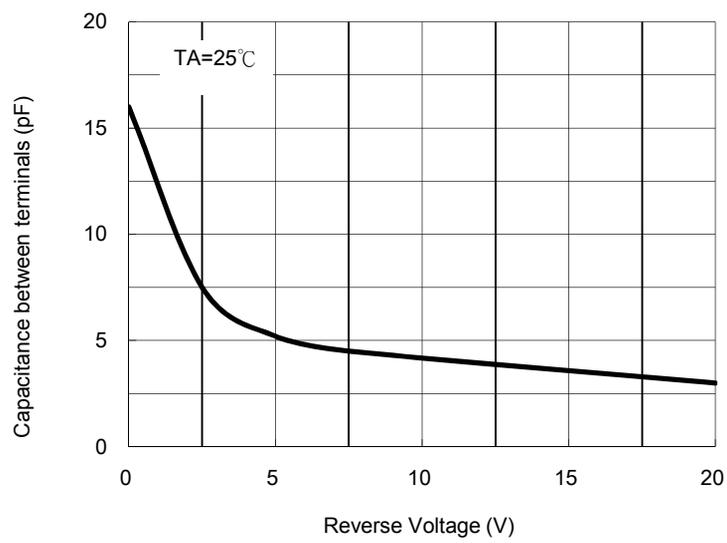
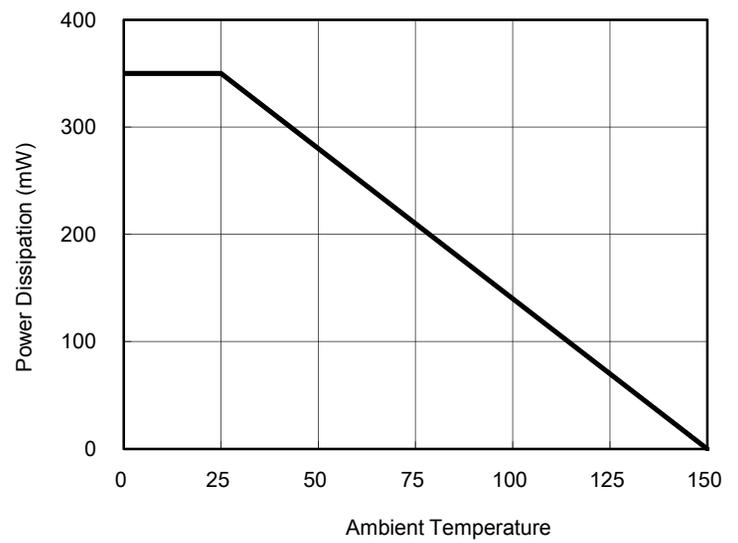


Fig.4 Power Derating Curve



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ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX (Note 2)	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
2CZ400x (Note 1)	-xx	RP	G	SOD-123	3K / 7" Reel

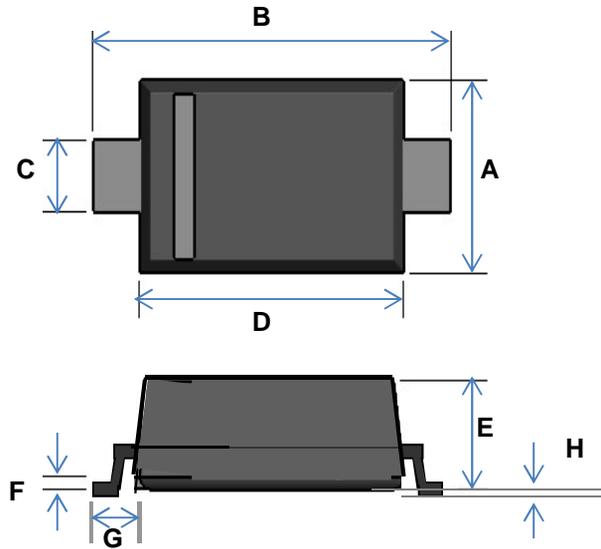
Note 1: "x" defines voltage from 400V (2CZ4004) to 600V (2CZ4005)

Note 2: Part No. Suffix „-xx “ would be used for special requirement

EXAMPLE					
PREFERRED PART NO.	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
2CZ4004 RP	2CZ4004		RP		Multiple manufacture source
2CZ4004 RPG	2CZ4004		RP	G	Multiple manufacture source Green compound
2CZ4004-M0 RPG	2CZ4004	M0	RP	G	Defined manufacture source Green compound

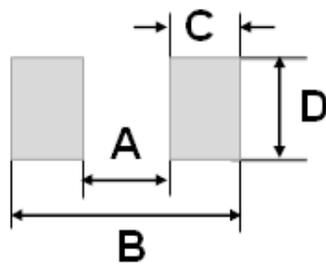
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PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.40	1.80	0.055	0.071
B	3.55	3.85	0.140	0.152
C	0.45	0.70	0.018	0.028
D	2.55	2.85	0.100	0.112
E	0.95	1.35	0.037	0.053
F	0.05	0.15	0.002	0.006
G	0.50 REF		0.02 REF	
H	-	0.10	-	0.004

SUGGEST PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
A	2.36	0.093
B	4.19	0.165
C	0.91	0.036
D	1.22	0.048

MARKING

Part No.	Marking
2CZ4004	Z44
2CZ4005	Z45

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