

## 1A, 800V Rectifiers

### FEATURES

- Surface mount device type
- Low peakage current
- Compliant to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

### APPLICATIONS

- The devices are designed for high frequency miniatures switched Mode power supplies such as adapters, lighting and on-board DC/DC converters.

### MECHANICAL DATA

- Case: SOD-123 small outline plastic package
- Molding compound meets UL 94 V-0 flammability rating
- Moisture sensitivity level: level 1, per J-STD-020
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Polarity: Indicated by cathode band
- Weight: 9.5 mg (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_{F(AV)}$	1	A
$V_{RRM}$	800	V
$I_{FSM}$	7.5	A
$V_F$ at $I_F=1A$	1.1	V
$T_{JMAX}$	150	°C
Package	SOD-123	
Configuration	Single dice	



ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	PART NUMBER	UNIT
Marking code on the device		Z46	
Non-repetitive peak reverse voltage $I_R=100\mu\text{A}$	$V_{RRM}$	800	V
RMS reverse voltage	$V_{R(RMS)}$	560	V
Forward current	$I_O$	1	A
Non-repetitive peak forward surge current 8.3ms half sine wave	$I_{FSM}$	7.5	A
Power dissipation	$P_D$	350	mW
Junction temperature range	$T_J$	- 55 to +150	°C
Storage temperature range	$T_{STG}$	- 55 to +150	°C

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-ambient thermal resistance	$R_{\theta JA}$	357	°C/W

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)					
<b>PARAMETER</b>	<b>CONDITIONS</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>MAX</b>	<b>UNIT</b>
Forward voltage per diode <sup>(1)</sup>	$I_F = 1\text{A}, T_J = 25^\circ\text{C}$	$V_F$	-	1.1	V
Reverse current @ rated $V_R$ per diode <sup>(2)</sup>	$V_R = 800\text{V}, T_J = 25^\circ\text{C}$	$I_R$	-	5	$\mu\text{A}$
Junction capacitance	1 MHz, $V_R = 4\text{V}$	$C_J$	-	15	pF

**Notes:**

1. Pulse test with  $PW = 0.3\text{ ms}$
2. Pulse test with  $PW = 30\text{ ms}$

<b>ORDERING INFORMATION</b>				
<b>PART NO.</b>	<b>PACKING CODE</b>	<b>PACKING CODE SUFFIX</b>	<b>PACKAGE</b>	<b>PACKING</b>
2CZ4006 (Note 1)	RH	G	SOD-123	3K / 7" Reel

**Notes:**

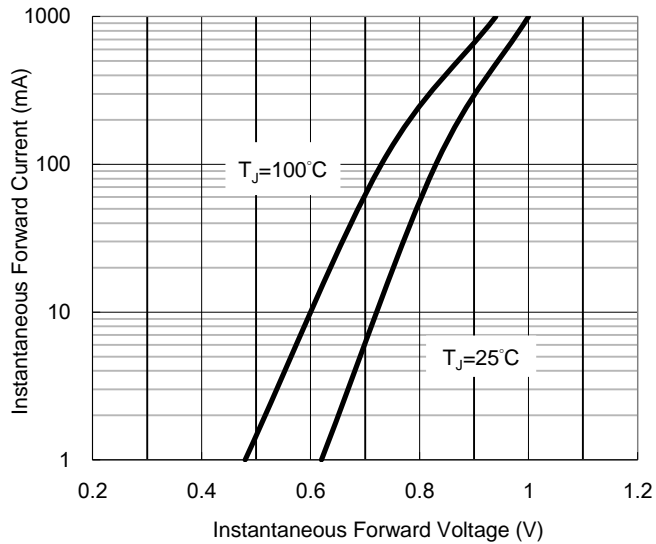
1. Whole series with green compound

<b>EXAMPLE</b>				
<b>EXAMPLE P/N</b>	<b>PART NO.</b>	<b>PACKING CODE</b>	<b>PACKING CODE SUFFIX</b>	<b>DESCRIPTION</b>
2CZ4006 RHG	2CZ4006	RH	G	Green compound

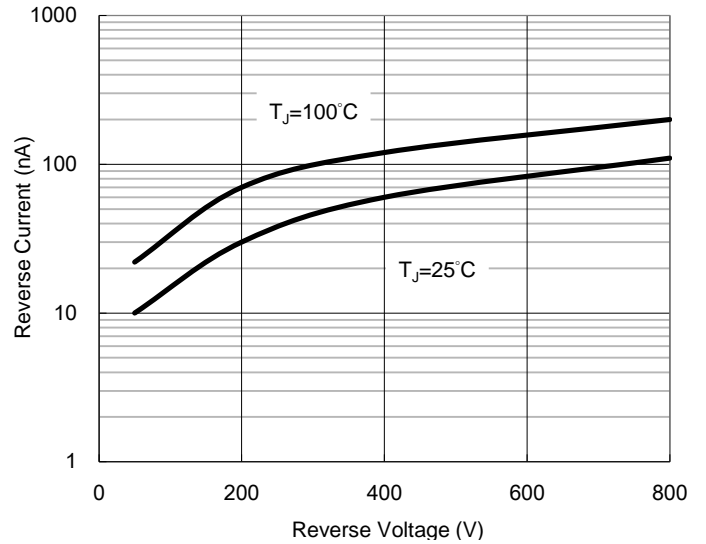
**CHARACTERISTICS CURVES**

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

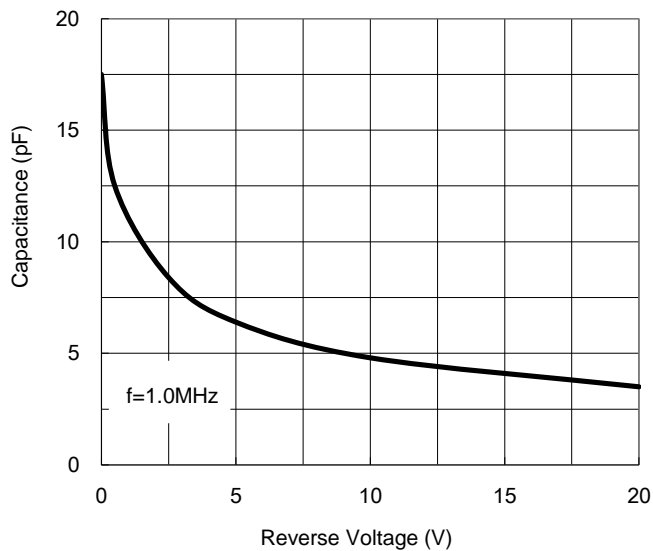
**Fig.1 Typical Forward Characteristics**



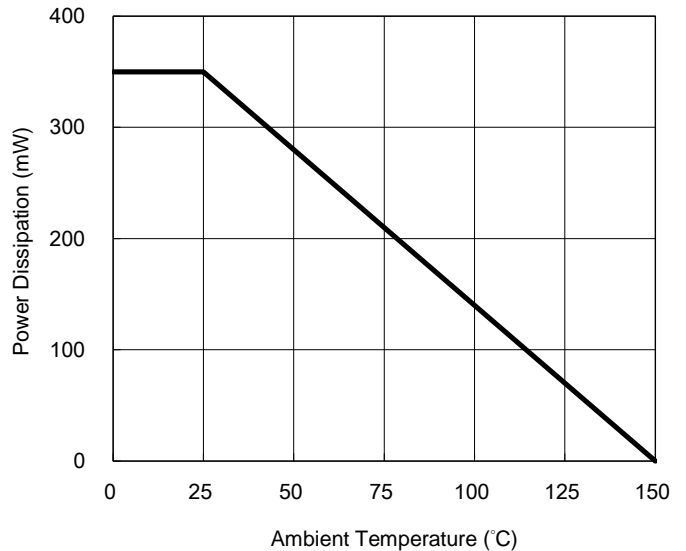
**Fig. 2 Reverse Characteristics**



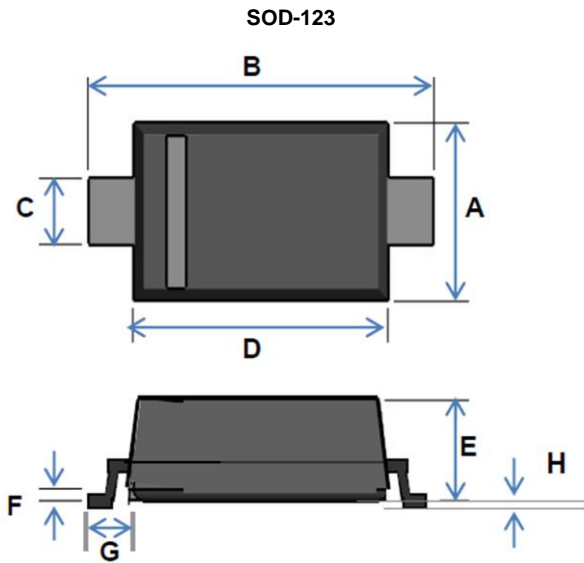
**Fig.3 Capacitance Characteristics**



**Fig. 4 Power Derating Curve**

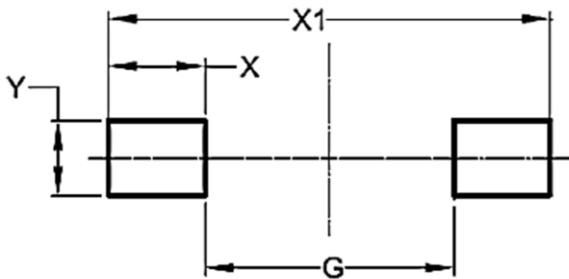


**PACKAGE OUTLINE DIMENSION**



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)
	Min	Min
G	2.25	0.089
X	0.90	0.035
X1	4.05	0.159
Y	0.95	0.037

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