

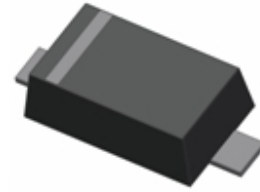
## 200mW SOD-523 SURFACE MOUNT

### Very Small Outline Flat Lead Plastic Package

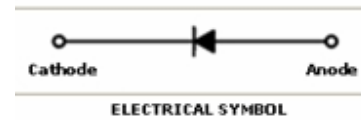
### General Purpose Application

### High Speed Switching Diode

Green Product



SOD-523 Flat Lead



#### Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	200	mW
$T_{STG}$	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	+150	$^\circ\text{C}$
$V_R$	Reverse Voltage	75	V
$I_{FSM}$	Peak Forward Current (Pulse Width=1s)	500	mA
$I_{FM}$	Forward Current	200	mA

These ratings are limiting values above which the serviceability of the diode may be impaired.

#### Specification Features:

- § Fast Switching Device ( $T_{RR} < 4.0 \text{ nS}$ )
- § RoHS Compliant
- § Green EMC
- § Matte Tin(Sn) Lead Finish
- § Band Indicates Cathode
- § Weight: approx. 0.002g
- § AEC-Q101 Qualified

#### DEVICE MARKING CODE:

Device Type	Device Marking
TCBAS16	E6

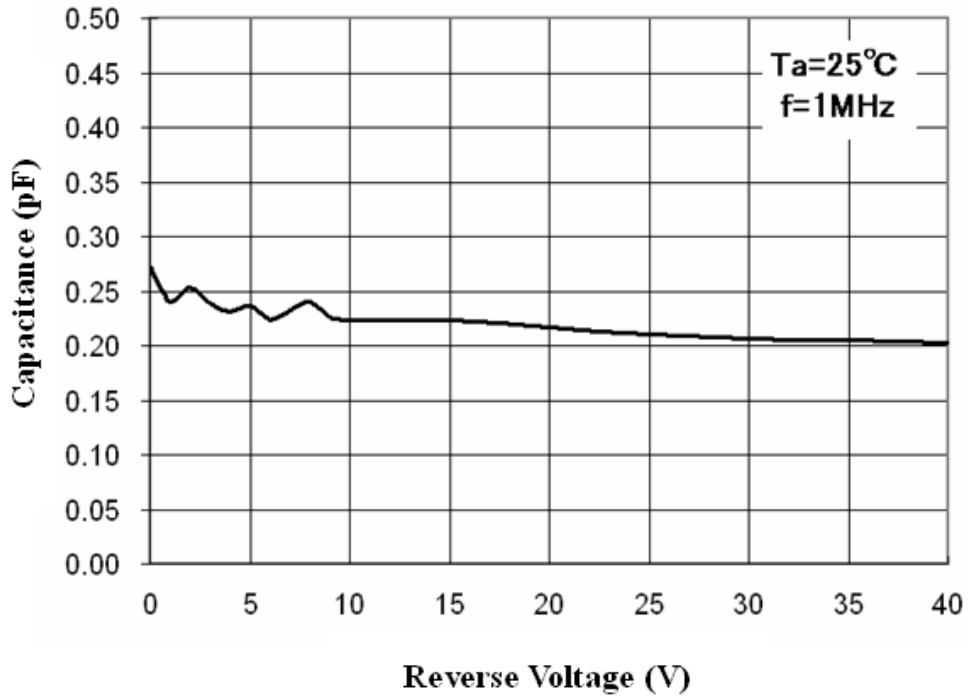
#### Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Limits		Unit
			Min	Max	
$B_V$	Breakdown Voltage	$I_R = 100\mu\text{A}$	75		Volts
$I_R$	Reverse Leakage Current	$V_R = 75\text{V}$		1	$\mu\text{A}$
$V_F$	Forward Voltage	$I_F = 1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$ $I_F = 100\text{mA}$		0.715 0.855 1.1 1.3	Volts
$T_{RR}$	Reverse Recovery Time	$I_F = 10\text{mA}$ $V_R = 6\text{V}$ $R_L = 100\Omega$		4	nS
$C$	Capacitance	$V_R = 0\text{V}$ , $f = 1\text{MHz}$		4	pF

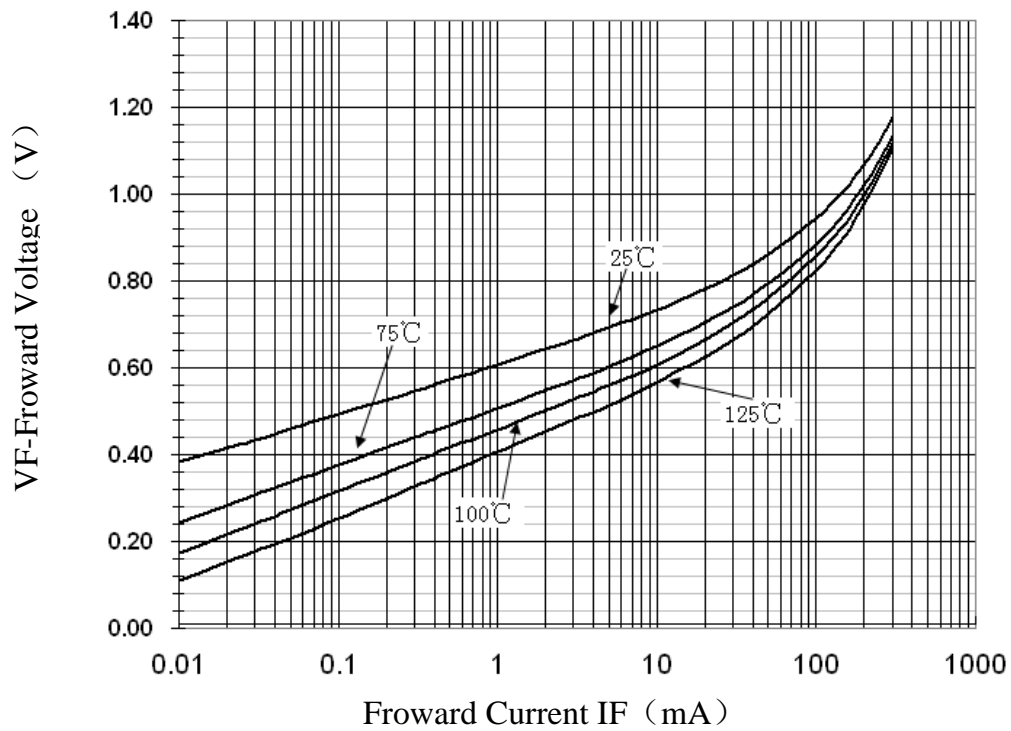
#### Typical Performance Characteristics



### Total Capacitance

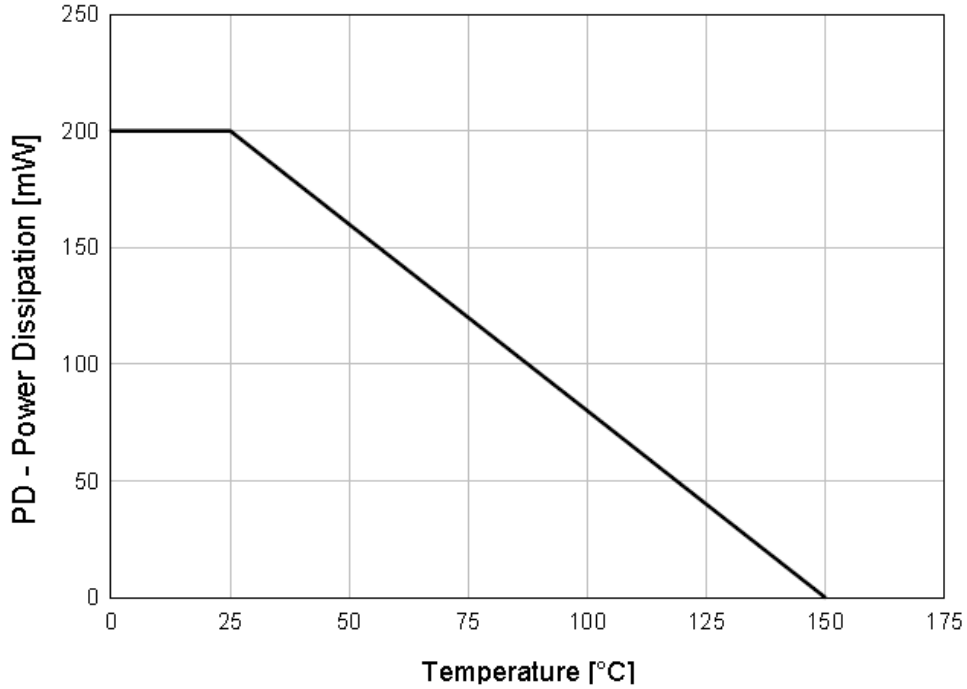


### Forward Voltage vs Ambient Temperature

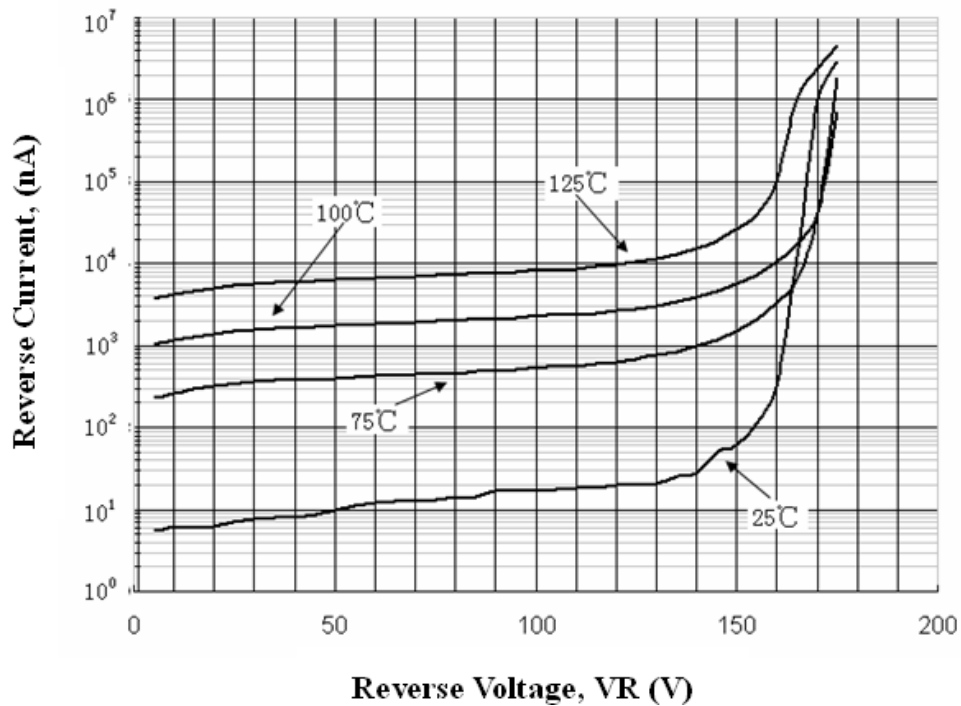




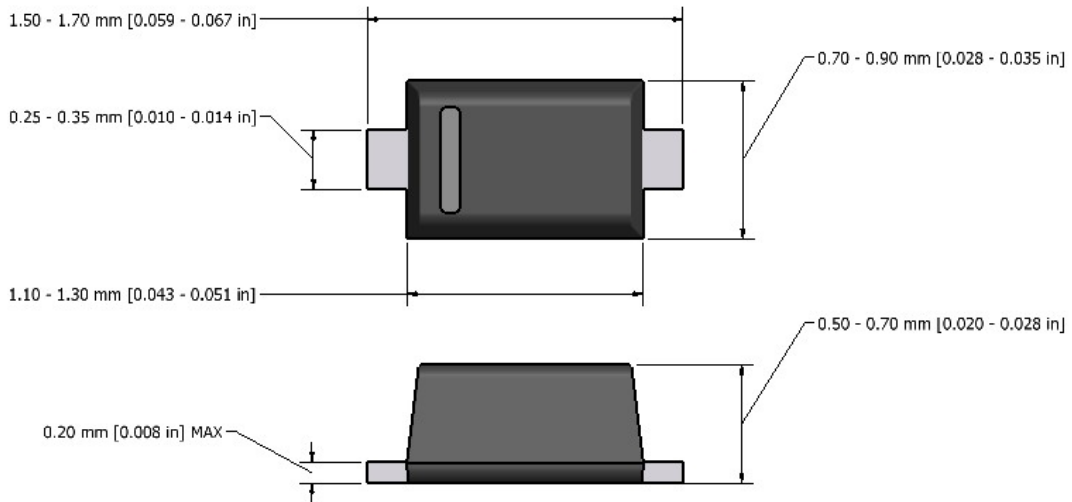
Power Derating Curve



Reverse Current vs Reverse Voltage



**Flat Lead SOD-523 Package Outline**



**Note:** Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

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## NOTICE

The information presented in this document is for reference only. Tak Cheong reserves the right to make changes without notice for the specification of the products displayed herein.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Tak Cheong Semiconductor Co., Ltd., or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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**“AEC-Q101 QUALIFIED” Statement:**

Tak Cheong has the capabilities to conduct tests for product packages by grouping in selective bases. Tak Cheong reserves the rights for making necessary arrangement for the subject test due to the amount of time and resources involved.