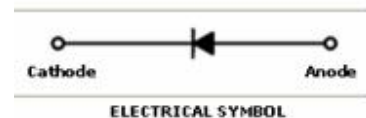


## 200mW SOD-523 SURFACE MOUNT Very Small Outline Flat Lead Plastic Package General Purpose Application Fast Switching Diode

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	$^\circ\text{C}$
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	100	V
$V_{RRM}$	Repetitive Peak Reverse Voltage	75	V
$I_{FRM}$	Repetitive Peak Forward Current	300	mA
$I_O$	Continuous Forward Current	150	mA

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

### Specification Features:

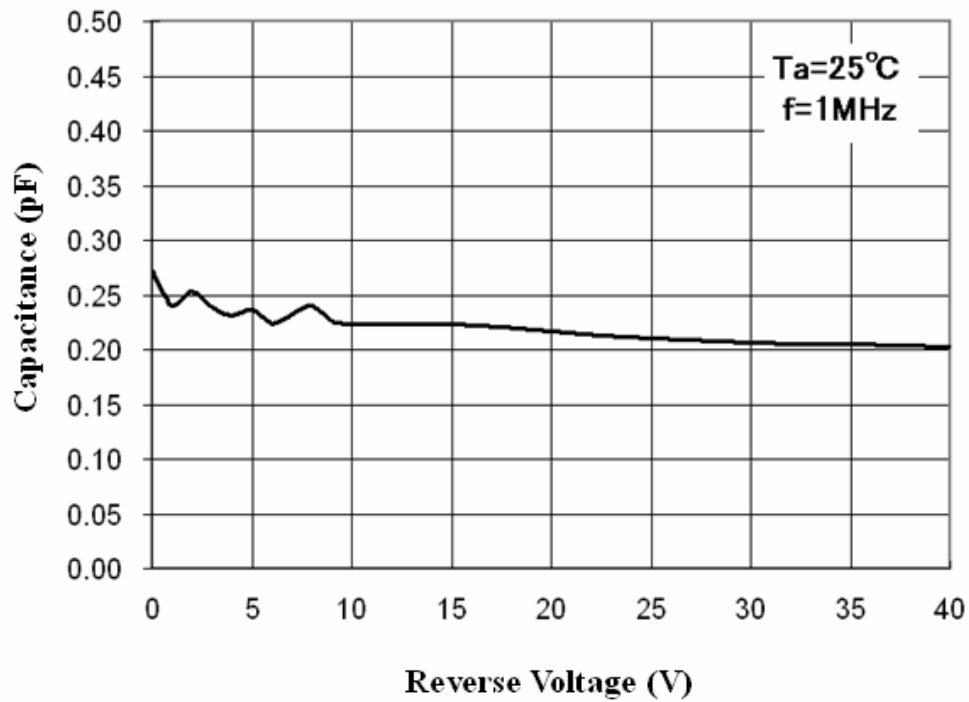
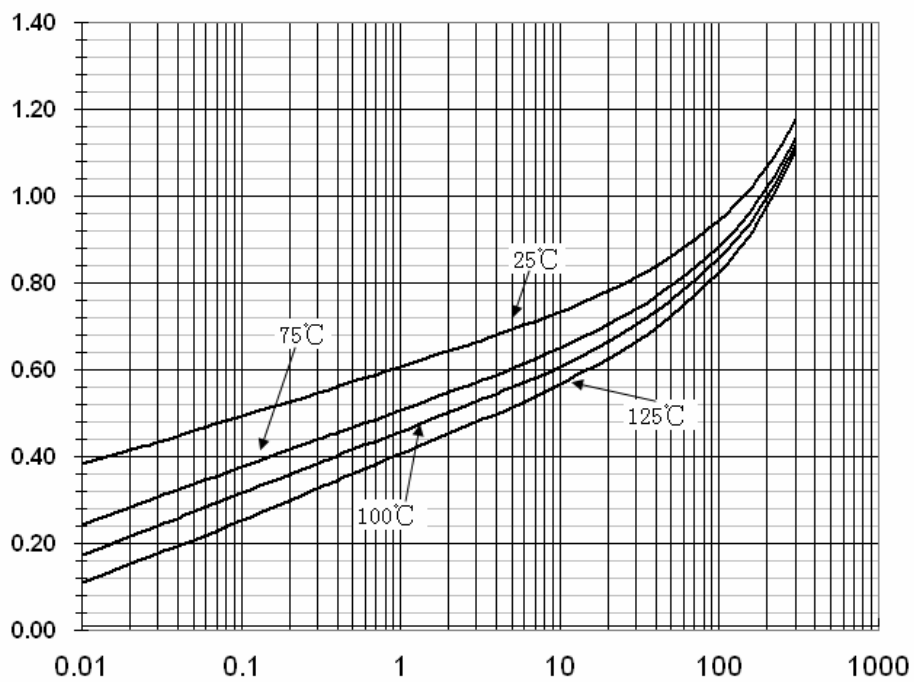
- Fast Switching Device ( $T_{RR} < 4.0$  nS)
- General Purpose Diodes
- Extremely Small SOD-523 Package
- Flat Lead SOD-523 Small Outline Plastic Package
- Surface Device Type Mounting
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode

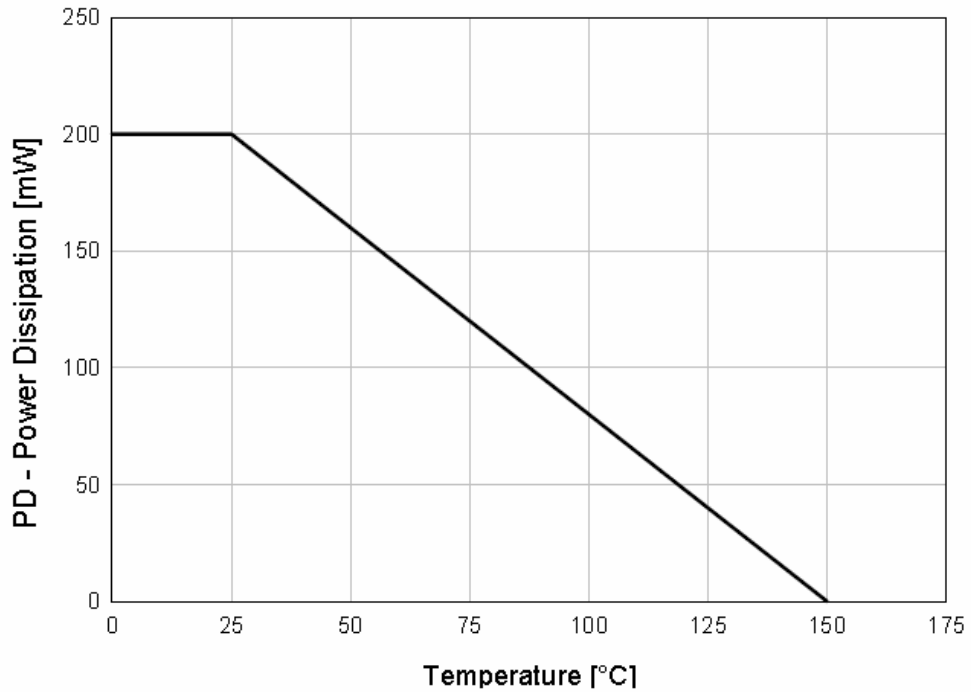
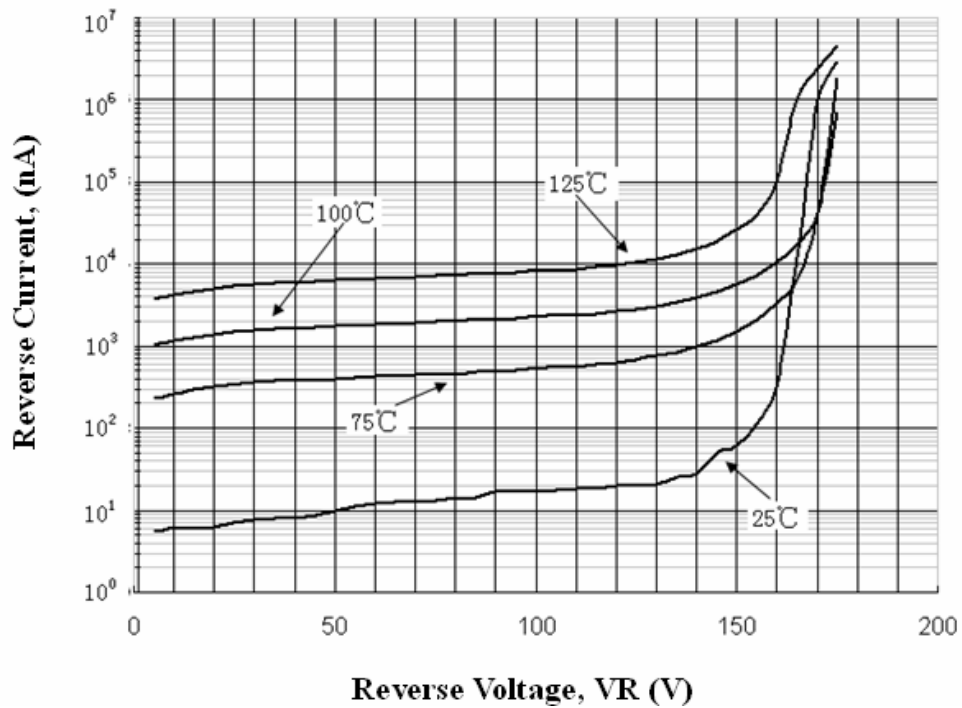
### DEVICE MARKING CODE:

Device Type	Device Marking
TC1N4148WT	E1
TC1N4448WT	E2
TC1N914BWT	E3

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

Symbol	Parameter	Test Condition	Limits		Unit
			Min	Max	
$B_V$	Breakdown Voltage	$I_R = 100\mu\text{A}$	100		Volts
		$I_R = 5\mu\text{A}$	75		
$I_R$	Reverse Leakage Current	$V_R = 20\text{V}$		25	nA
		$V_R = 75\text{V}$		5	$\mu\text{A}$
$V_F$	Forward Voltage	TC1N4448WT, TC1N914BWT $I_F = 5\text{mA}$	0.62	0.72	Volts
		TC1N4148WT $I_F = 10\text{mA}$		1.0	
		TC1N4448WT, TC1N914BWT $I_F = 100\text{mA}$		1.0	
$T_{RR}$	Reverse Recovery Time	$I_F = 10\text{mA}$ $I_R = 60\text{mA}$ $R_L = 100\Omega$ $I_{RR} = 1\text{mA}$		4	nS
$C$	Capacitance	$V_R = 0\text{V}$ , $f = 1\text{MHz}$		4	pF

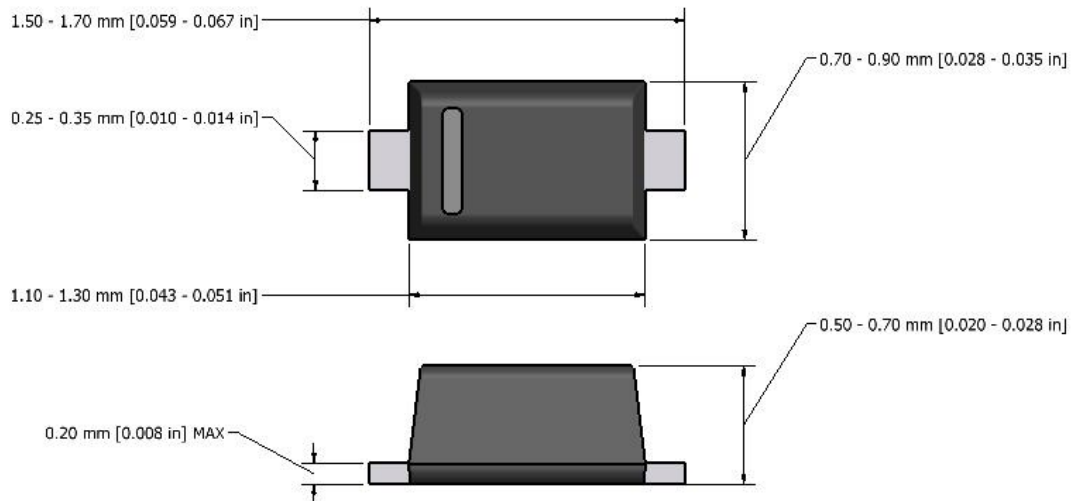
**Typical Performance Characteristics**
**Total Capacitance**

**Forward Voltage vs Ambient Temperature**


**Power Derating Curve**

**Reverse Current vs Reverse Voltage**


---

**Flat Lead SOD-523 Package Outline**


---



This datasheet presents technical data of Tak Cheong's Switching Diodes. Complete specifications for the individual devices are provided in the form of datasheets. A comprehensive Selector Guide is included to simplify the task of choosing the best set of components required for a specific application. For additional information, please visit our website <http://www.takcheong.com>.

Although information in this datasheet has been carefully checked, no responsibility for the inaccuracies can be assumed by Tak Cheong. Please consult your nearest Tak Cheong's sales office for further assistance.

Tak Cheong reserves the right to make changes without further notice to any products herein to further improve reliability, function or design, cost and productivity.

**TAK CHEONG**<sup>®</sup> and  are registered trademarks of Tak Cheong Electronics (Holdings) Co., Ltd.