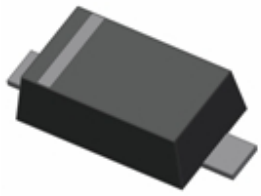
TAK CHEONG®

SEMICONDUCTOR

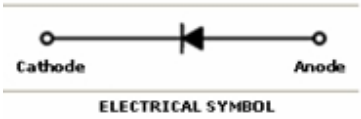
200mW SOD-523 SURFACE MOUNT

Very Small Outline Flat Lead Plastic Package
General Purpose Application
Fast Switching Diode

Green Product



SOD-523 Flat Lead



ELECTRICAL SYMBOL

Absolute Maximum Ratings T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
P_D	Power Dissipation	200	mW
T_{STG}	Storage Temperature Range	-55 to +150	°C
T_J	Operating Junction Temperature	+150	°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
I_{FSM}	Non-repetitive Peak Forward Surge Current (Pulse Width=1us)	2	A

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
- § RoHS Compliant
- § Green EMC
- § Matte Tin(Sn) Lead Finish
- § Band Indicates Cathode
- § Weight: approx. 0.002g
- § AEC-Q101 Qualified

DEVICE MARKING CODE:

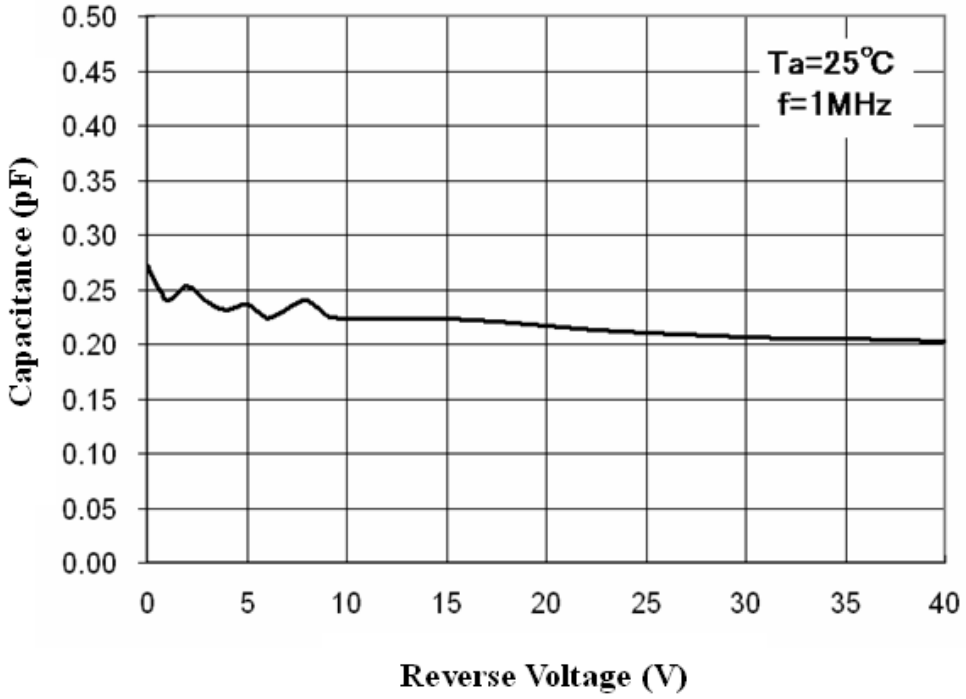
Device Type	Device Marking
TC1N4148WT	E1
TC1N4448WT	E2
TC1N914BWT	E3

Electrical Characteristics T_A = 25°C unless otherwise noted

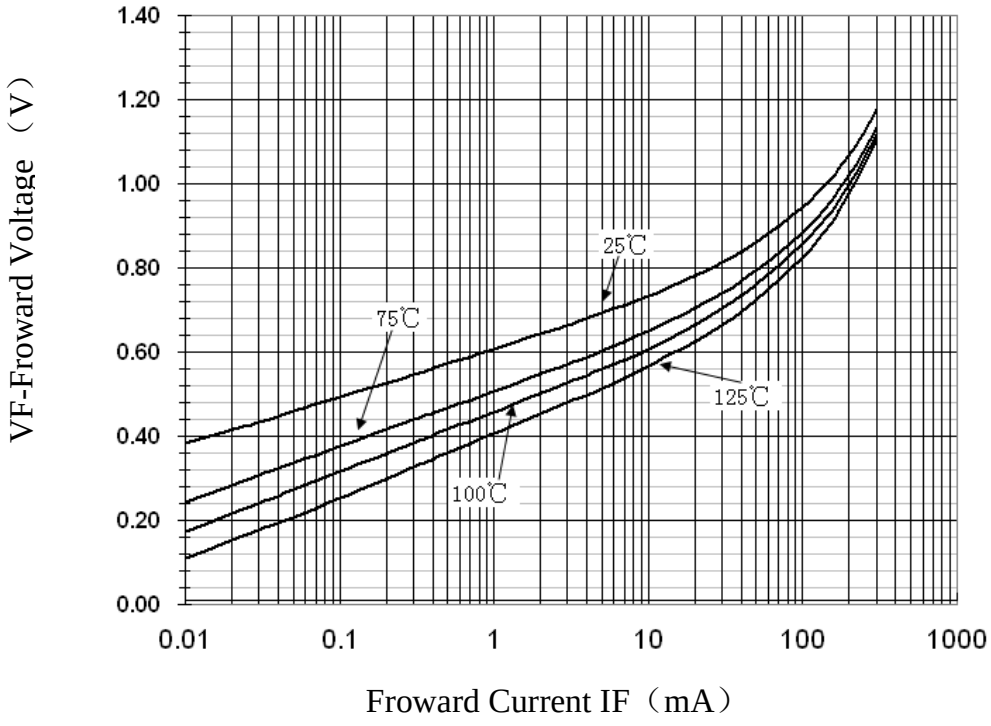
Symbol	Parameter	Test Condition	Limits		Unit
			Min	Max	
B_V	Breakdown Voltage	I_R=100μA	100		Volts
		I_R=5μA	75		
I_R	Reverse Leakage Current	V_R=20V		25	nA
		V_R=75V		5	μA
V_F	Forward Voltage TC1N4448WT, TC1N914BWT	I_F=5mA	0.62	0.72	
	TC1N4148WT	I_F=10mA		1.0	Volts
	TC1N4448WT, TC1N914BWT	I_F=100mA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

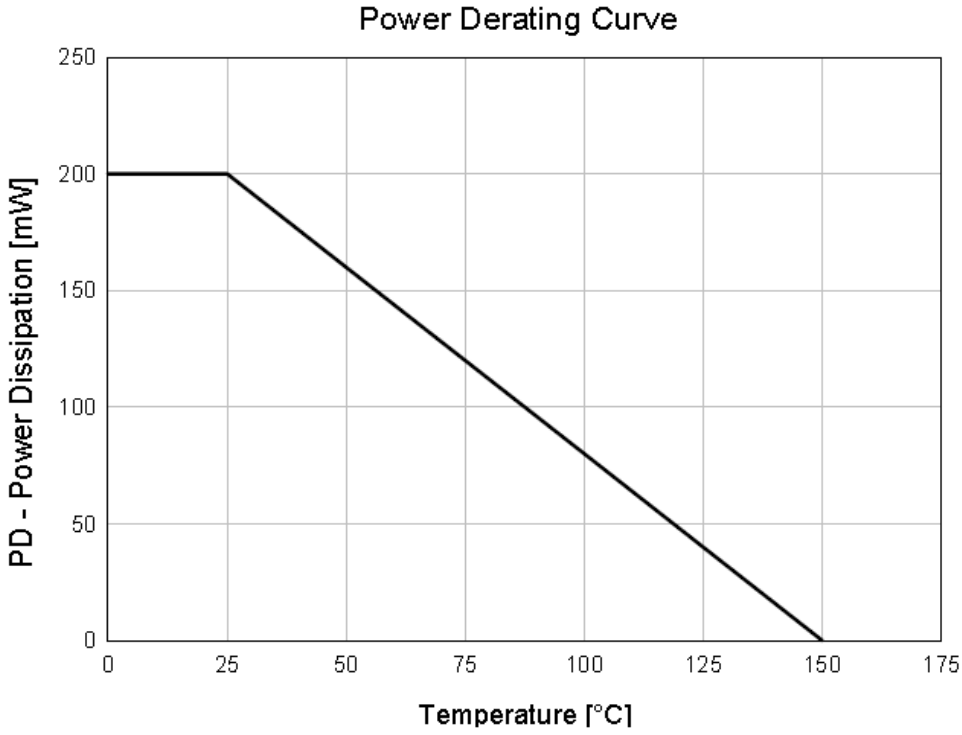
Typical Performance Characteristics

Total Capacitance

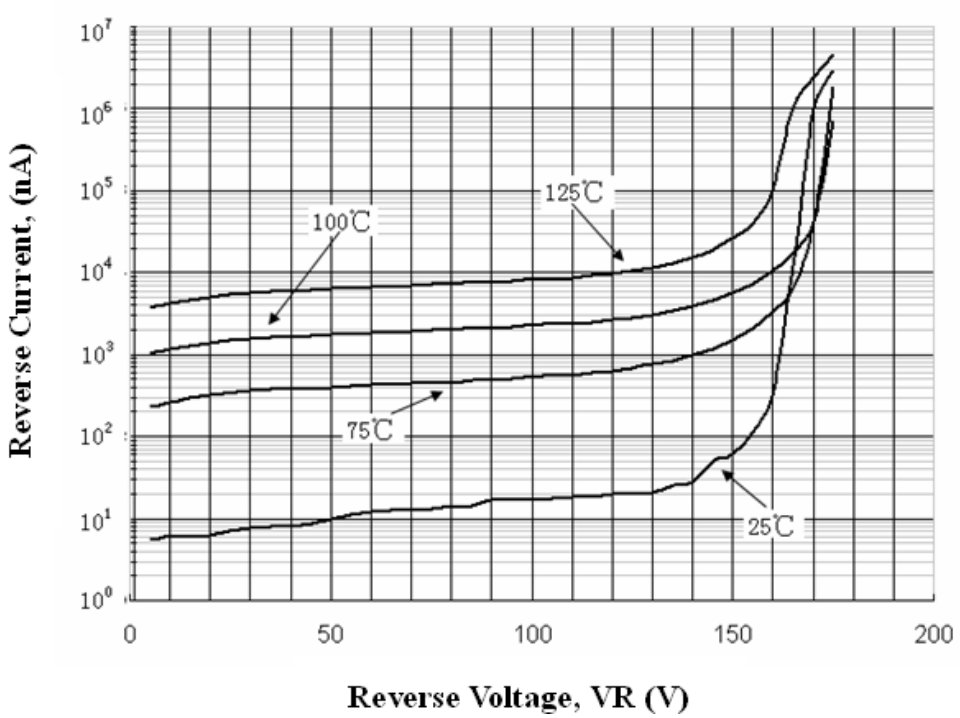


Forward Voltage vs Ambient Temperature

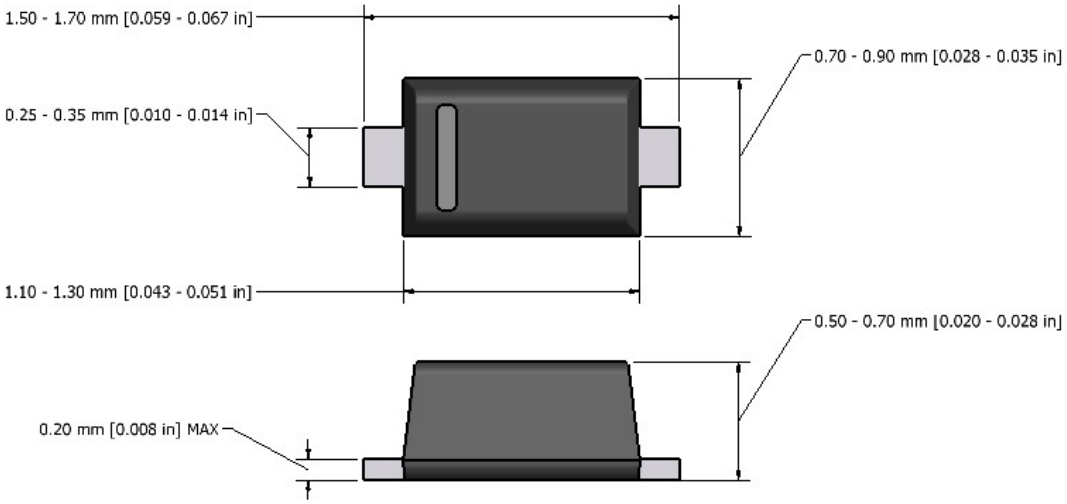




Reverse Current vs Reverse VoltageReverse



Flat Lead SOD-523 Package Outline



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

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 with 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 damagers 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.