

Technical Data
Data Sheet N0583, Rev. -

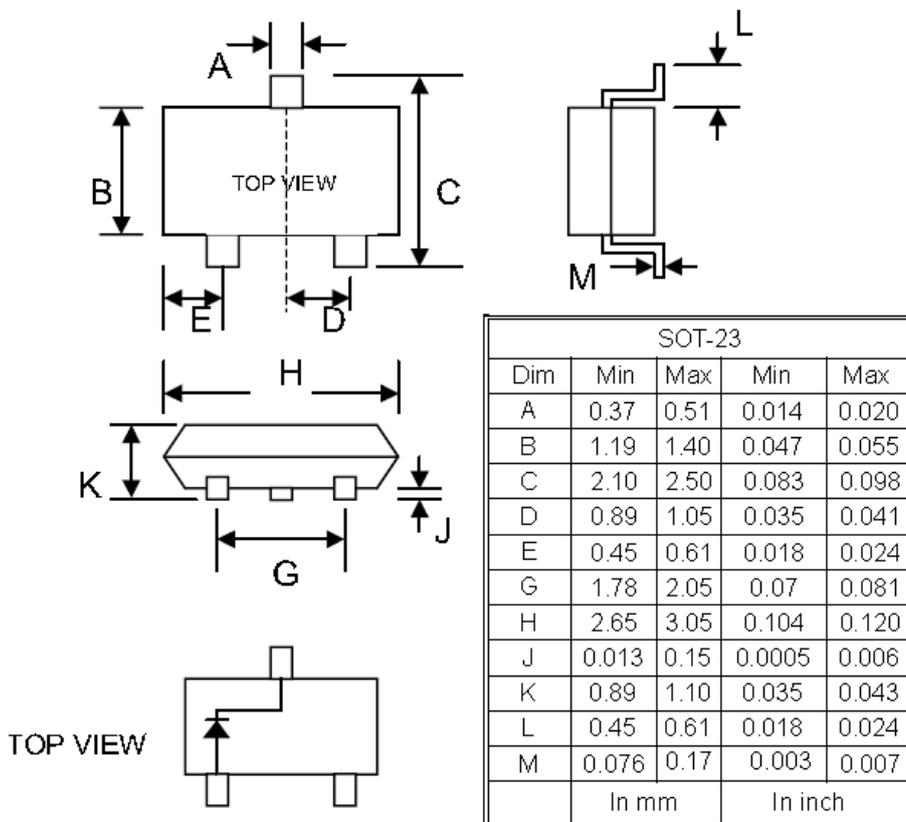
Features:

- High Conductance
- Fast Switching
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose and Switching
- Plastic Material –UL Recognition Flammability Classification 94V-O
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Mechanical Data:

- Case: SOT-23, Molded Plastic
- Terminals: Plated leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.008 grams(approx.)
- Mounting Position: Any
- Marking: A6

Mechanical Dimensions: In mm/Inches



SOT-23



Maximum Ratings @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Characteristic	Symbol	Limits	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	75	V
Forward Continuous Current(Note 1)	I_F	300	mA
Average Rectified Output Current(Note 1)	I_O	200	mA
Peak Forward Surge Current(Note 1) @ $t < 1.0\mu\text{s}$	I_{FSM}	2.0	A
Power Dissipation(Note 1)	P_d	350	mW
Typical Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	357	$^{\circ}\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	$^{\circ}\text{C}$

Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	75	-	V	@ $I_{RS}=100\mu\text{A}$
Forward Voltage	V_F	-	0.855	V	@ $I_F=10\text{mA}$
Reverse Leakage Current	I_R	-	1.0	μA	@ $V_R=75\text{V}$
Junction Capacitance	C_j	-	2.0	pF	$V_R=0\text{V}, f=1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	-	6.0	ns	$I_F=I_R=10\text{mA},$ $I_{RR}=0.1 \times I_R, R_L=100\Omega$

Note: 1. Device mounted on fiberglass substrate 40×40×1.5mm

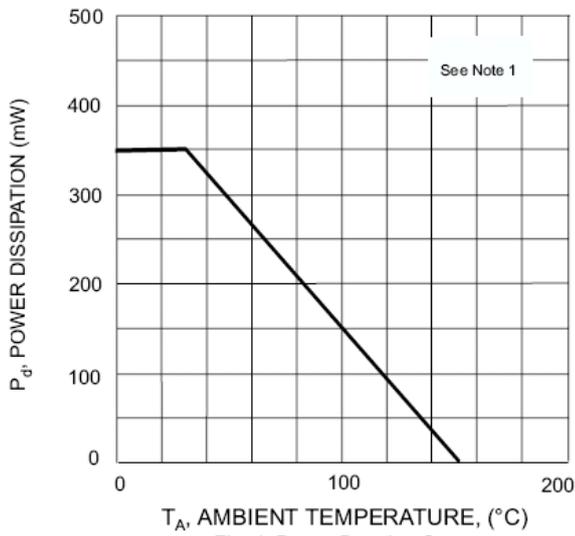


Fig. 1 Power Derating Curve

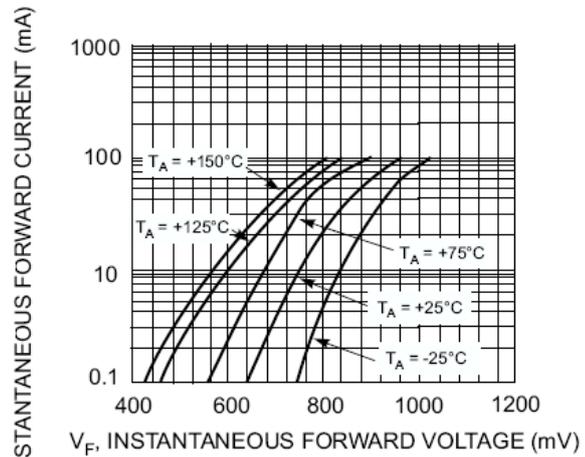


Fig. 2, Typical Forward Characteristics

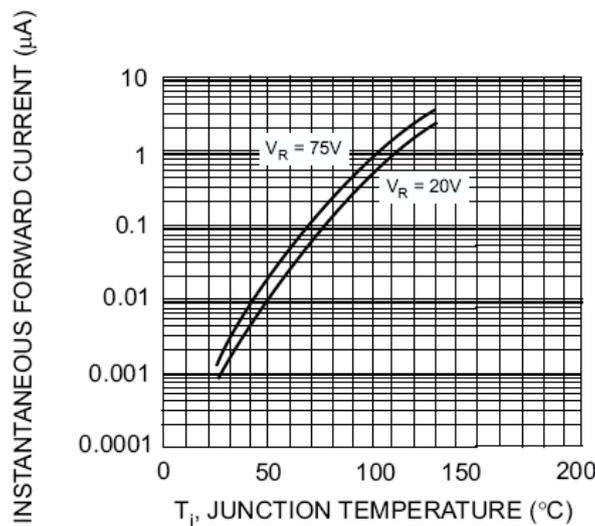


Fig. 3, Typical Reverse Characteristics



DISCLAIMER:

1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC - Sangdest Microelectronics (Nanjing) Co., Ltd sales department for the latest version of the datasheet(s).

2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.

3- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC - Sangdest Microelectronics (Nanjing) Co., Ltd assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.

4- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.

5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.

6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.

7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..