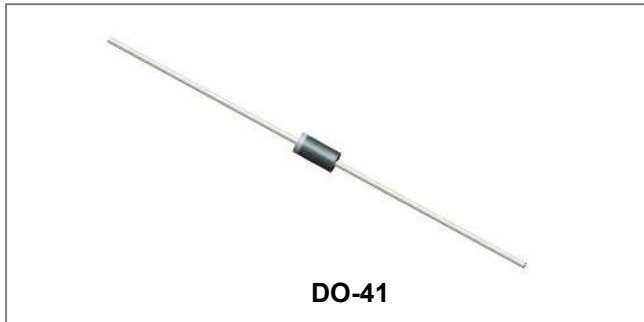


## R2000F FAST RECOVERY RECTIFIER



### Features

- Fast switching
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Mechanical Data

- Case: DO-41 molded plastic body
- Lead: MIL-STD-202E method 208C guaranteed
- Epoxy: Device has flammability classification 94-0
- Polarity: Cathode Band
- Weight: 0.35 grams(Approx)

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

Characteristic	Symbol	R2000F	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	2000	V
RMS Reverse Voltage	$V_{R(RMS)}$	1400	V
Average Rectified Output Current @ $T_A = 50^{\circ}\text{C}$	$I_{(AV)}$	0.2	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30	A
Forward Voltage      @ $I_F = 0.2\text{A}$	$V_{FM}$	4.0	V
Peak Reverse Current      @ $T_A = 25^{\circ}\text{C}$ At Rated DC Blocking Voltage      @ $T_A = 55^{\circ}\text{C}$	$I_{RM}$	5.0 100	$\mu\text{A}$
Reverse recovery time (Note1)	$t_{rr}$	500	ns
Operating and Storage Temperature Range	$T_{STG}$	-55 to +150	$^{\circ}\text{C}$

Note: 1.Reverse recovery condition  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$ .

**Ratings and Characteristics Curves**

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

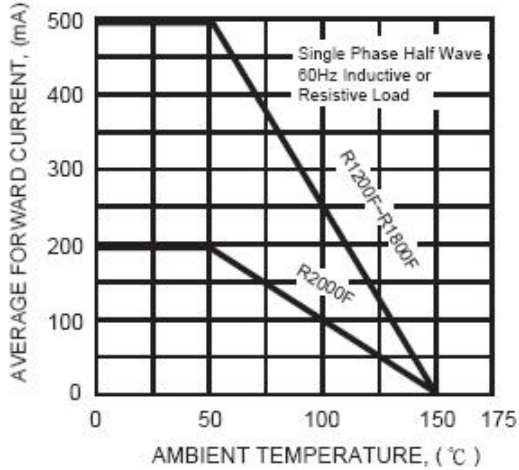


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

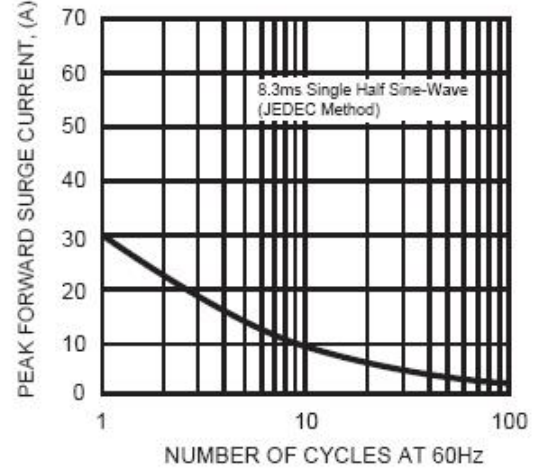
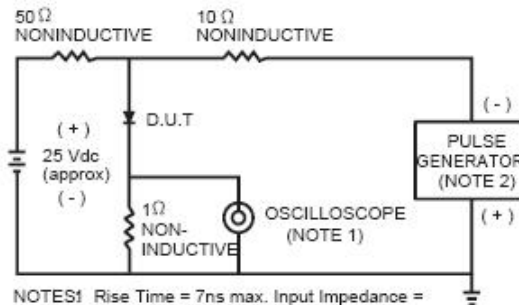
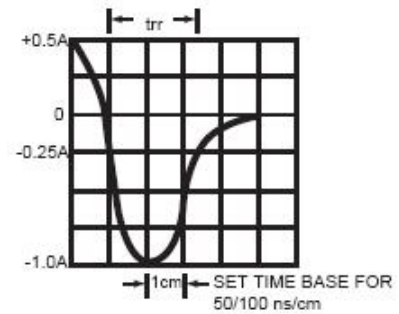


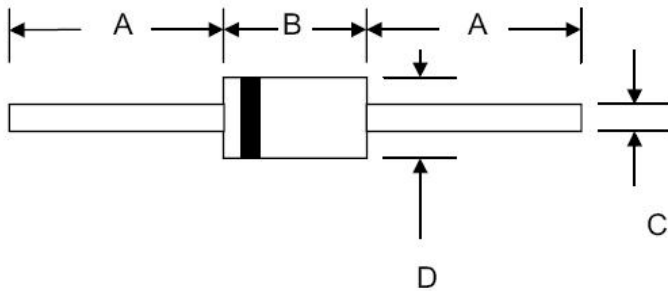
FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time = 7ns max. Input Impedance = 1 megohm. 22 pF.  
2. Rise Time = 10ns max. Source Impedance = 50 ohms.



**Mechanical Dimensions DO-41**



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	4.06	5.21	0.160	0.205
C	0.71	0.864	0.028	0.034
D	2.00	2.72	0.079	0.107

**Ordering Information**

Device	Package	Shipping
R2000F	DO-41 (Pb-Free)	5000pcs / tape

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**

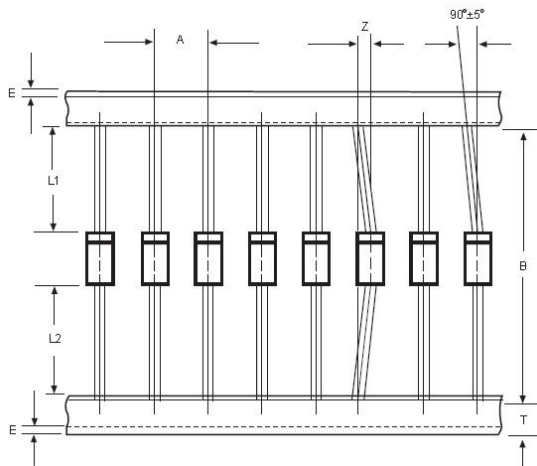


Where XXXXX is YYWWL

R2000F = Part Name  
SSG = SSG  
YY = Year  
WW = Week  
L = Lot Number

Cautions: Molding resin  
Epoxy resin UL:94V-0

**Carrier Tape Specification DO-41**



SYMBOL	Millimeters	
	Min.	Max.
A	4.50	5.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0



**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..