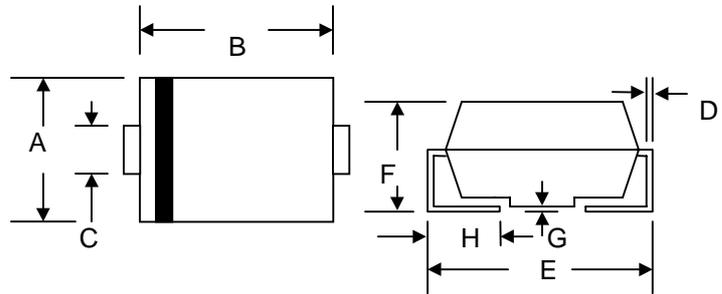


## 1.0A SURFACE MOUNT FAST RECOVERY RECTIFIER

### Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Surge Overload Rating to 30A Peak
- Low Power Loss
- Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O



### Mechanical Data

- Case: Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.064 grams (approx.)

SMA/DO-214AC		
Dim	Min	Max
A	2.50	2.90
B	4.00	4.60
C	1.40	1.60
D	0.152	0.305
E	4.80	5.28
F	2.00	2.44
G	0.051	0.203
H	0.76	1.52
All Dimensions in mm		

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

Characteristic	Symbol	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	V
Working Peak Reverse Voltage	$V_{RWM}$							
DC Blocking Voltage	$V_R$							
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	V
Average Rectified Output Current @ $T_L = 90^\circ\text{C}$	$I_O$	1.0						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 @ $I_F = 1.0\text{A}$	$V_{FM}$	1.30						V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	$I_{RM}$	5.0 300						$\mu\text{A}$
Reverse Recovery Time (Note 1)	$t_{rr}$	150				250	500	nS
Typical Junction Capacitance (Note 2)	$C_j$	10						pF
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$	32						K/W
Operating and Storage Temperature Range	$T_j, T_{STG}$	-50 to +150						$^\circ\text{C}$

Note: 1. Measured with  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{rr} = 0.25\text{A}$ ,  
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.  
 3. Mounted on P.C. Board with 8.0mm<sup>2</sup> land area.

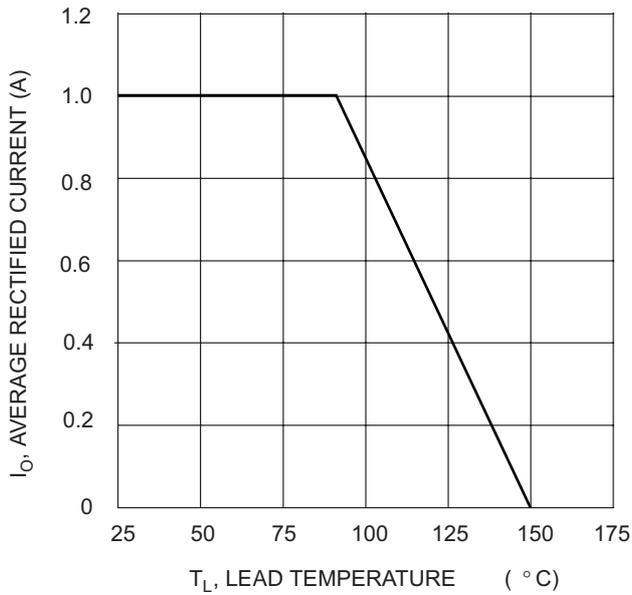


Fig. 1 Forward Current Derating Curve

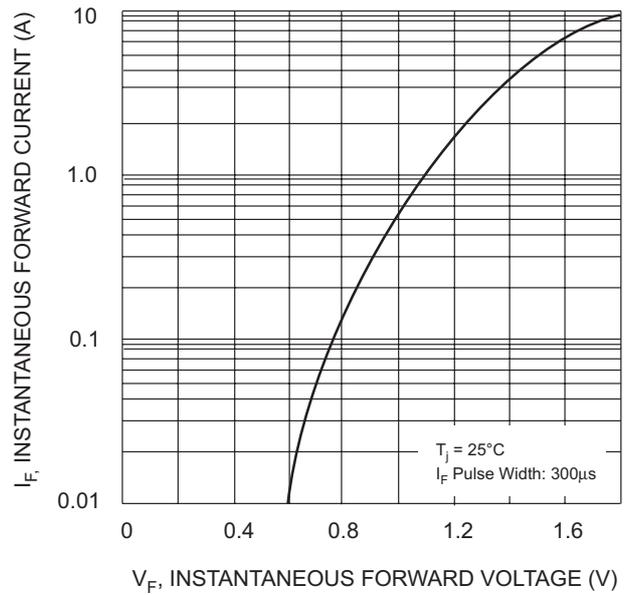


Fig. 2 Typical Forward Characteristics

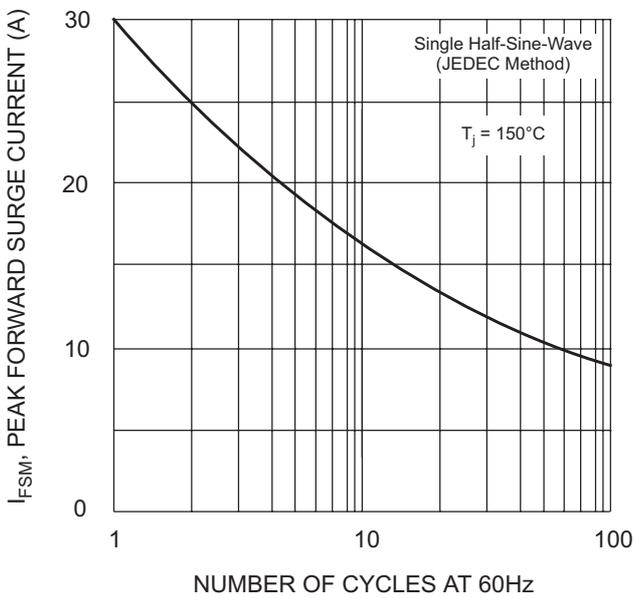


Fig. 3 Forward Surge Current Derating Curve

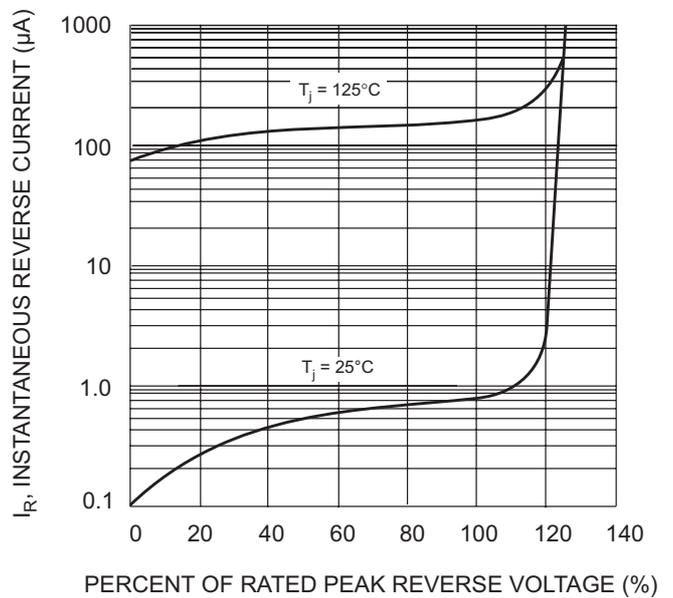
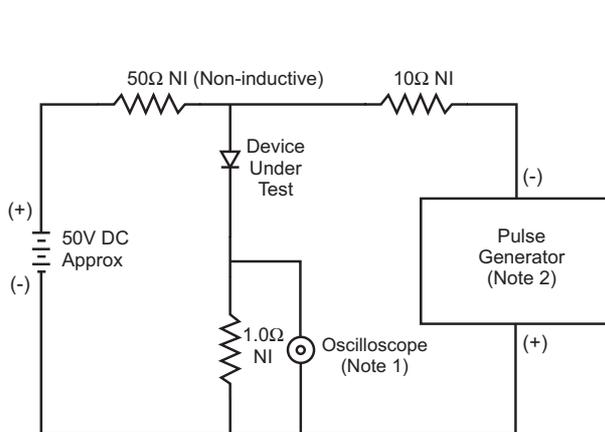


Fig. 4 Typical Reverse Characteristics



- Notes:  
 1. Rise Time = 7.0ns max. Input Impedance = 1.0M $\Omega$ , 22pF.  
 2. Rise Time = 10ns max. Input Impedance = 50 $\Omega$ .

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

## ORDERING INFORMATION

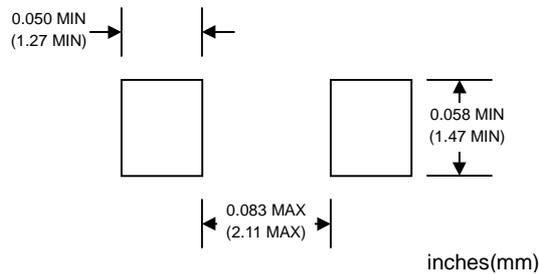
Product No.♦	Package Type	Shipping Quantity
RS1A-T1	SMA	1800/Tape & Reel
<b>RS1A-T3</b>	SMA	7500/Tape & Reel
RS1B-T1	SMA	1800/Tape & Reel
<b>RS1B-T3</b>	SMA	7500/Tape & Reel
RS1D-T1	SMA	1800/Tape & Reel
<b>RS1D-T3</b>	SMA	7500/Tape & Reel
RS1G-T1	SMA	1800/Tape & Reel
<b>RS1G-T3</b>	SMA	7500/Tape & Reel
RS1J-T1	SMA	1800/Tape & Reel
<b>RS1J-T3</b>	SMA	7500/Tape & Reel
RS1K-T1	SMA	1800/Tape & Reel
<b>RS1K-T3</b>	SMA	7500/Tape & Reel

Products listed in **bold** are WTE **Preferred** devices.

♦T1 suffix refers to a 7" reel. T3 suffix refers to a 13" reel.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

## RECOMMENDED FOOTPRINT



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**WARNING:** DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

**Won-Top Electronics Co., Ltd.**

No. 44 Yu Kang North 3rd Road, Chine Chen Dist., Kaohsiung, Taiwan

**Phone:** 886-7-822-5408 or 886-7-822-5410

**Fax:** 886-7-822-5417

**Email:** sales@wontop.com

**Internet:** <http://www.wontop.com>

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