



# RD2003JS-SB — Diffused Junction Silicon Diode Ultrahigh-Speed Switching Diode

## Features

- $V_F=1.3V$  max. ( $I_F=20A$ )
- $V_{RRM}=300V$
- $t_{TR}=20ns$  (typ.)

## Specifications

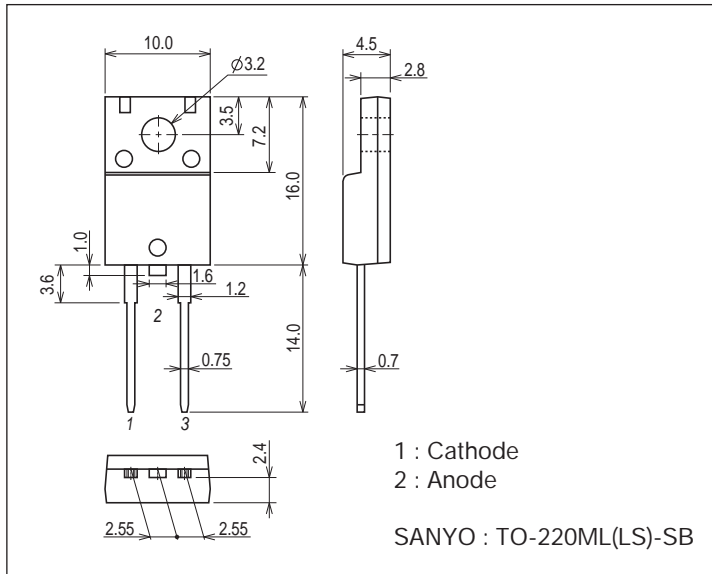
Absolute Maximum Ratings at  $T_a=25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	DC bias	300	V
Non-repeated Peak Reverse Surge Voltage	$V_{RSM}$	$PW \leq 100\mu s$ , duty $\leq 0.1$	350	V
Average Output Current	$I_O$	50Hz resistive load, Sine wave $T_c=38^\circ C$	20	A
R.M.S Forward Current	$I_F(RMS)$	$T_c=25^\circ C$ (SANYO's ideal heat dissipation condition) Package limited, DC	25	A
Surge Forward Current	$I_{FSM}$	50Hz sine wave 1pulse	180	A
Junction Temperature	$T_j$		150	$^\circ C$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ C$

## Package Dimensions

unit : mm (typ)

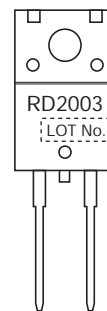
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## Product & Package Information

- Package : TO-220ML(LS)
- JEITA, JEDEC : SC-67, SOT-186A
- Minimum Packing Quantity : 100 pcs./bag, 50 pcs./magazine

## Marking



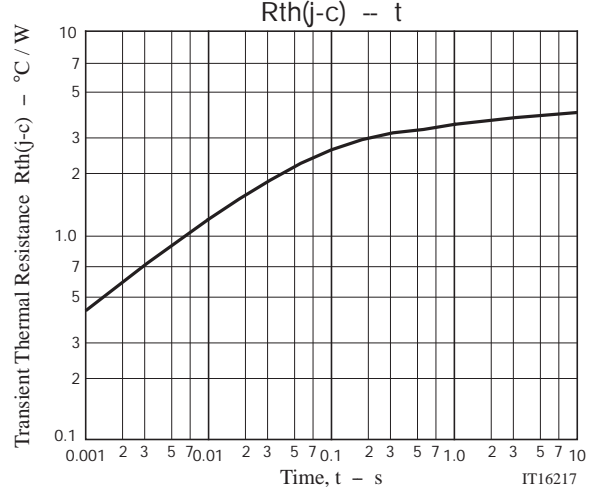
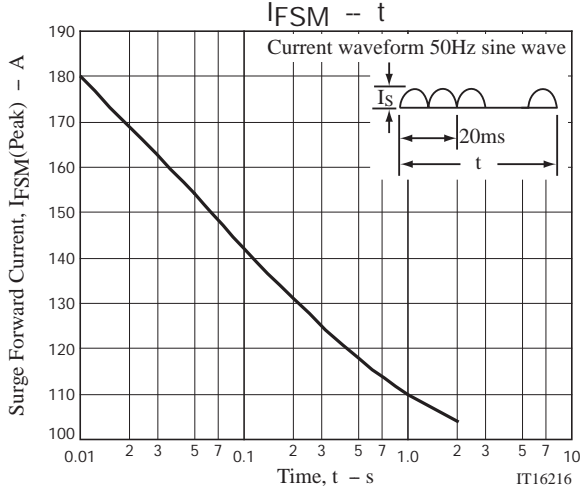
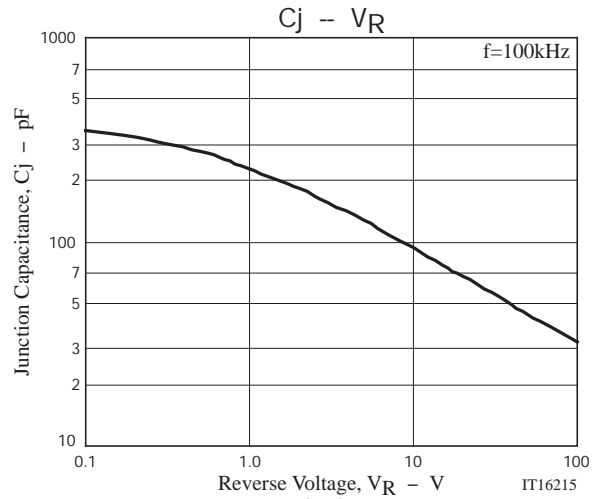
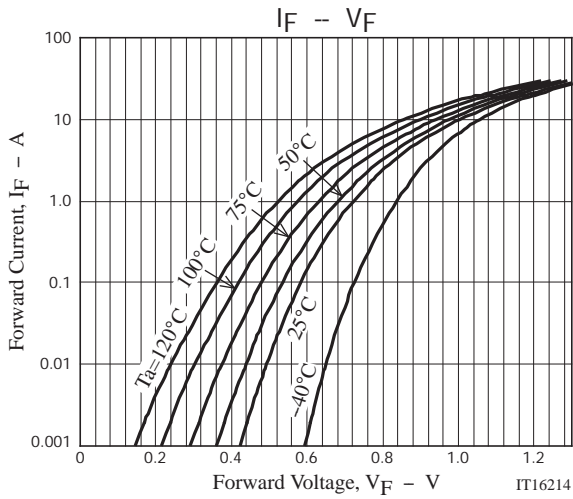
## Electrical Connection



# RD2003JS-SB

## Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=1\text{mA}$	300			V
Forward Voltage	$V_F$	$I_F=20\text{A}$		1.15	1.3	V
Reverse Current	$I_R$	$V_R=300\text{V}$			100	$\mu\text{A}$
Reverse Recovery Time	$t_{rr1}$	$I_F=10\text{A}$ , $di/dt=100\text{A}/\mu\text{s}$		50	60	ns
	$t_{rr2}$	$I_F=0.5\text{A}$ , $I_R=1\text{A}$		20		ns
Thermal Resistance	$R_{th(j-c)}$	Junction-Case : Smoothed DC			4.0	$^{\circ}\text{C} / \text{W}$



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