



SANYO Semiconductors

DATA SHEET

RD2003JS-SB — Diffused Junction Silicon Diode

Ultrahigh-Speed Switching Diode

Features

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

Specifications

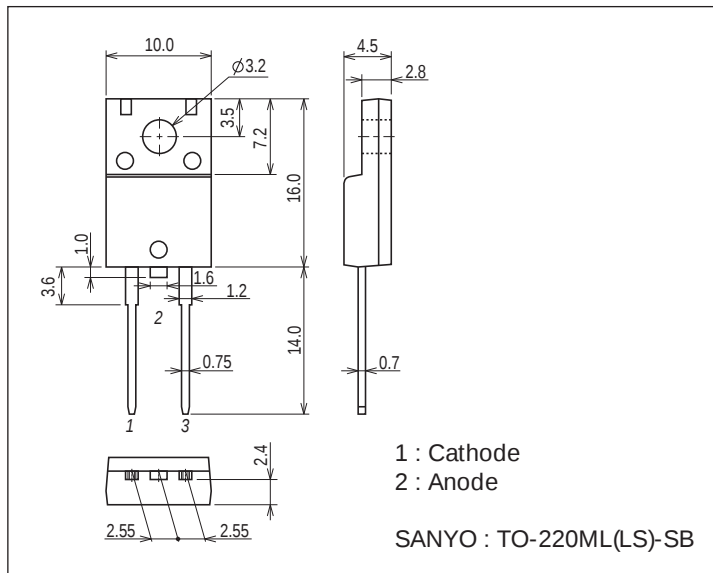
Absolute Maximum Ratings at $T_a=25^\circ C$

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 ≤ 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)

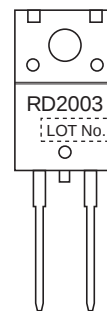
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Product & Package Information

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

Marking

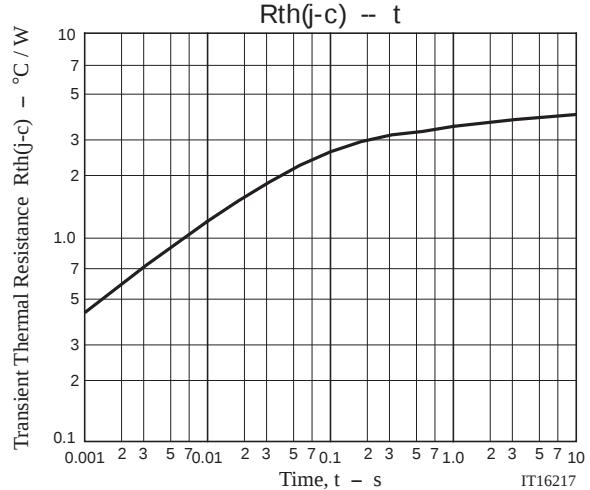
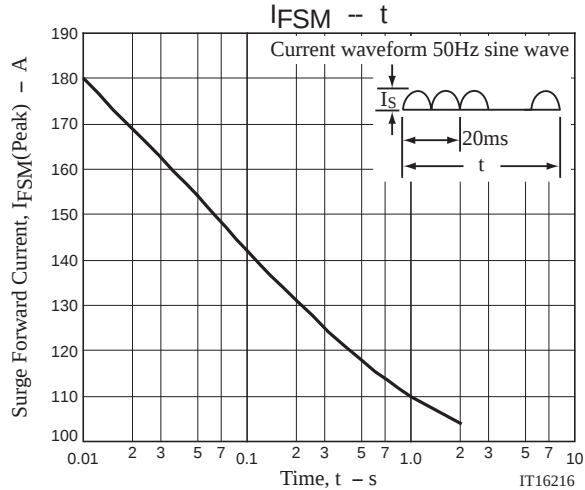
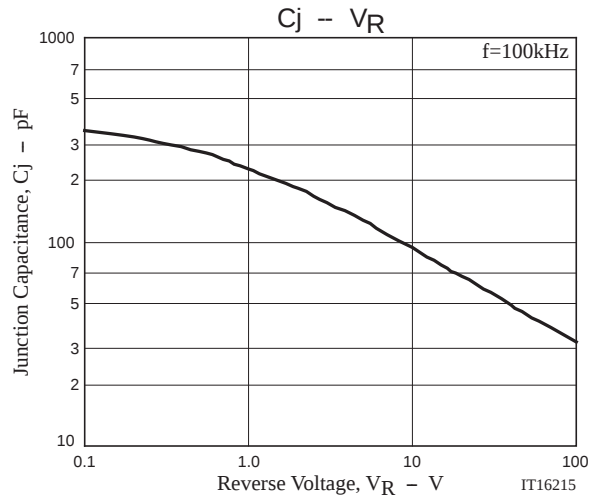
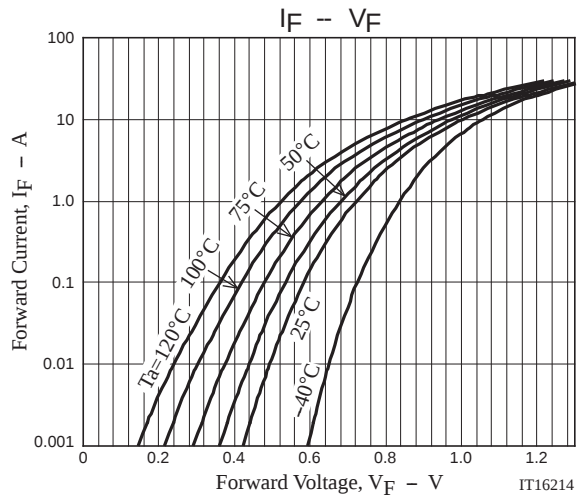


Electrical Connection



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	μA
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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