



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

RD2006RH-SB — Diffused Junction Silicon Diode Ultrahigh-Speed Switching Diode

Features

- $V_{RRM}=600V$
- $V_F=1.75V$ max. ($I_F=20A$)
- $t_{rr}=21ns$ (typ.)

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	DC bias	600	V
Average Output Current	I_O	50Hz resistive load, Sine wave $T_c=63^\circ C$	20	A
R.M.S Forward Current	$I_F(RMS)$	$T_c=25^\circ C$ (SANYO's ideal heat dissipation condition) *, Package limited, DC	30	A
Surge Forward Current	I_{FSM}	50Hz Sine wave, 1 pulse	220	A
Junction Temperature	T_j		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

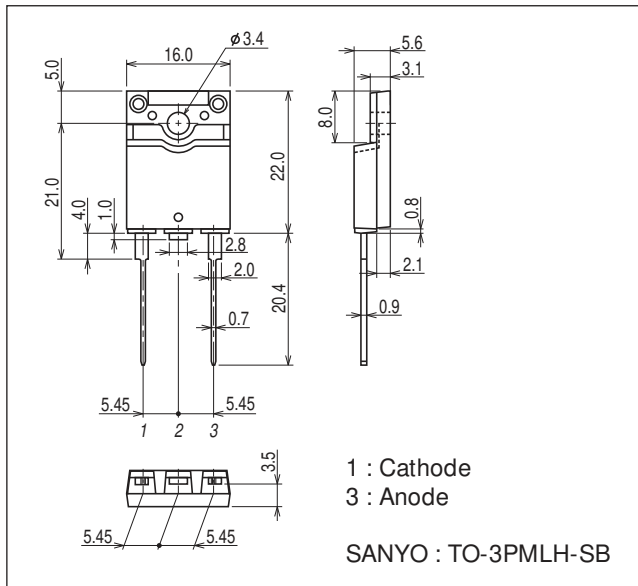
*. SANYO's condition is radiation from backside

The method is applying silicone grease to the backside of the device and attaching the device to water-cooled radiator made of aluminium

Package Dimensions

unit : mm (typ)

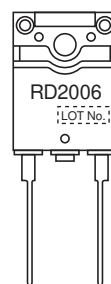
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Product & Package Information

- Package : TO-3PMLH
- JEITA, JEDEC : SC-93, TO-247, SOT-199
- Minimum Packing Quantity : 100 pcs./tray

Marking



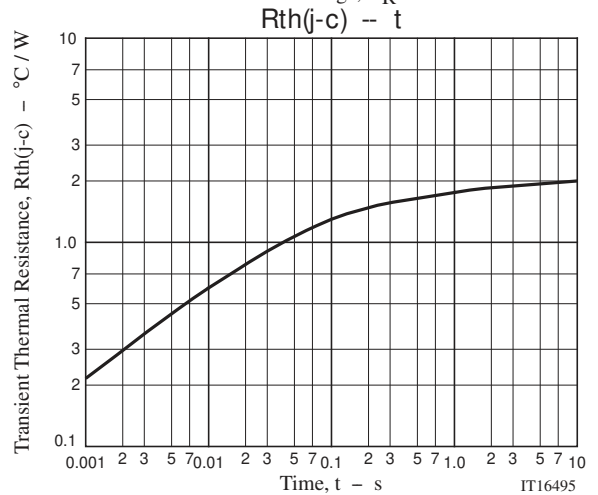
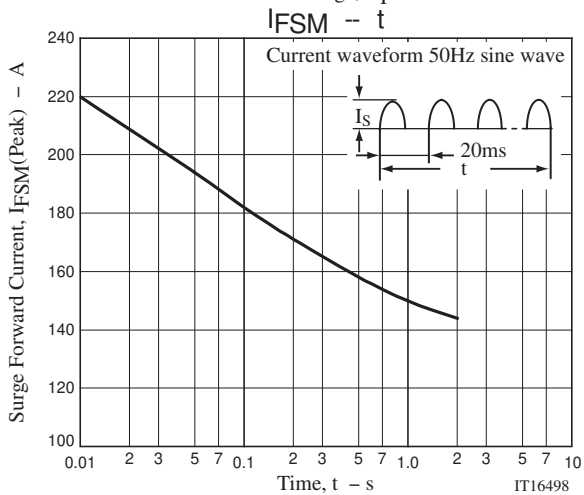
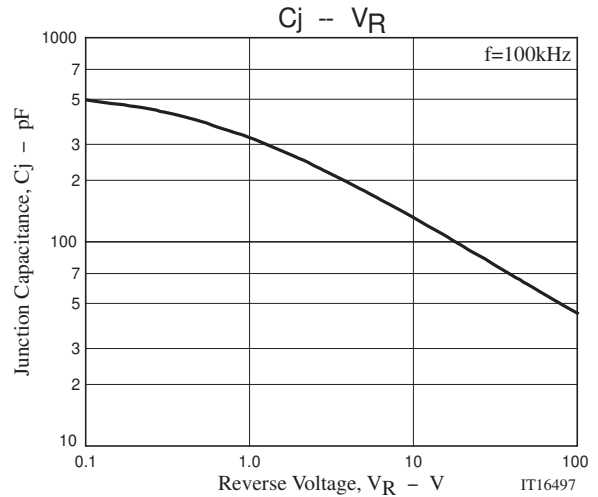
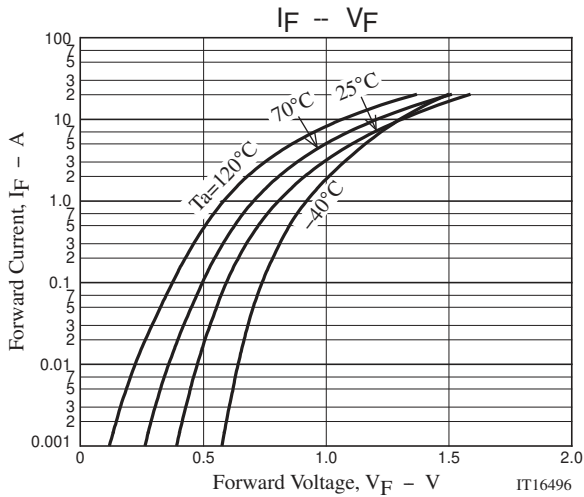
Electrical Connection



RD2006RH-SB

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	$I_R=1\text{mA}$	600			V
Forward Voltage	V_F	$I_F=20\text{A}$		1.6	1.75	V
Reverse Current	I_R	$V_R=600\text{V}$			100	μA
Reverse Recovery Time	t_{rr1}	$I_F=10\text{A}, di/dt=100\text{A}/\mu\text{s}$			50	ns
	t_{rr2}	$I_F=0.5\text{A}, I_R=1\text{A}$		21		ns
Thermal Resistance	$R_{th(j-c)}$	Junction-Case : Smoothed DC			2	$^{\circ}\text{C} / \text{W}$



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