



SANYO Semiconductors

## DATA SHEET

An ON Semiconductor Company

# UD2006FR — Diffused Junction Silicon Diode

## Low VF Switching Diode

### Features

- $V_F=1.4V$  max. ( $I_F=20A$ )
- $V_{RRM}=600V$
- $t_{rr}=60ns$  (typ.)

### Specifications

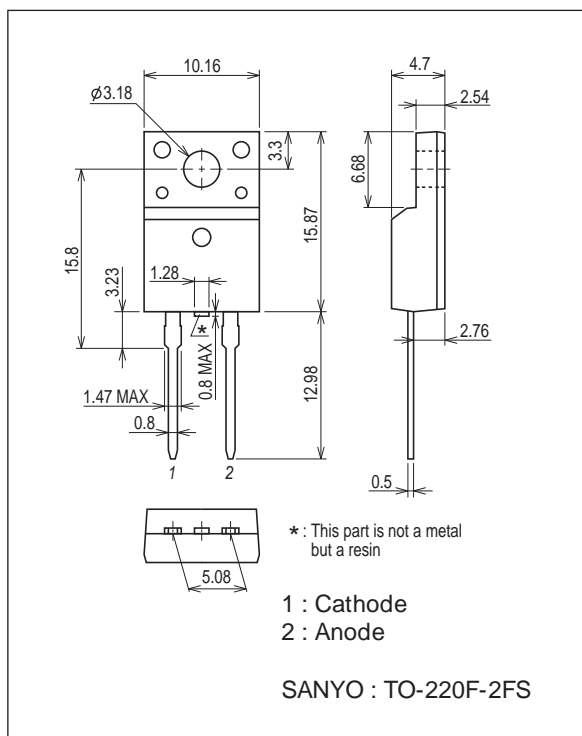
Absolute Maximum Ratings at  $T_a=25^\circ C$ 

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 $T_c=32^\circ C$	20	A
R.M.S Forward Current	$I_F(RMS)$	$T_c=25^\circ C$ (SANYO's ideal heat dissipation condition) Package limited, DC	24	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)

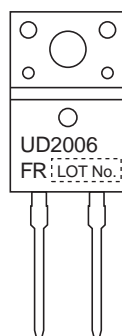
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### Product & Package Information

- Package : TO-220F-2FS
- JEITA, JEDEC : SC-67
- Minimum Packing Quantity : 50 pcs./magazine

### Marking



### Electrical Connection



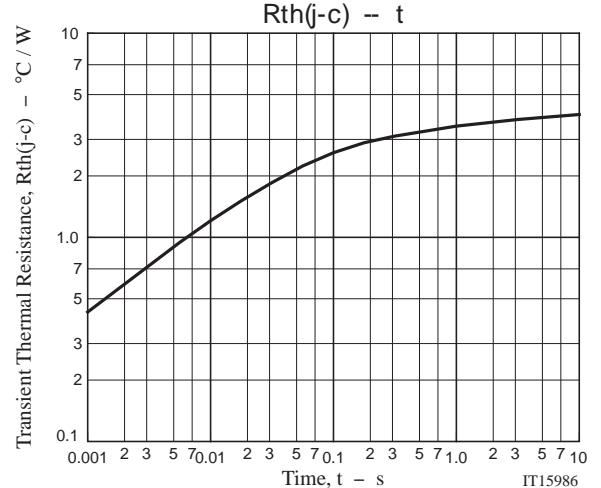
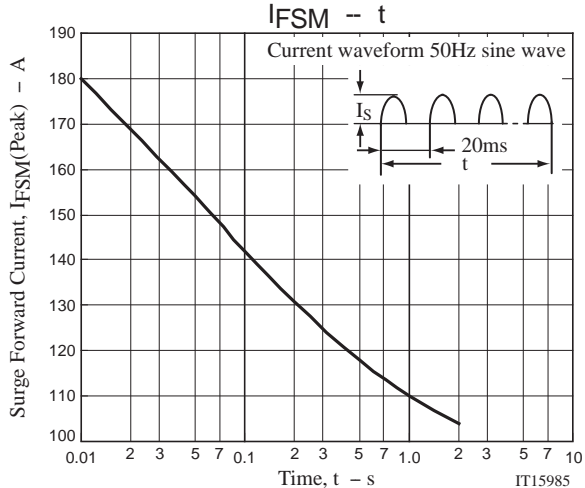
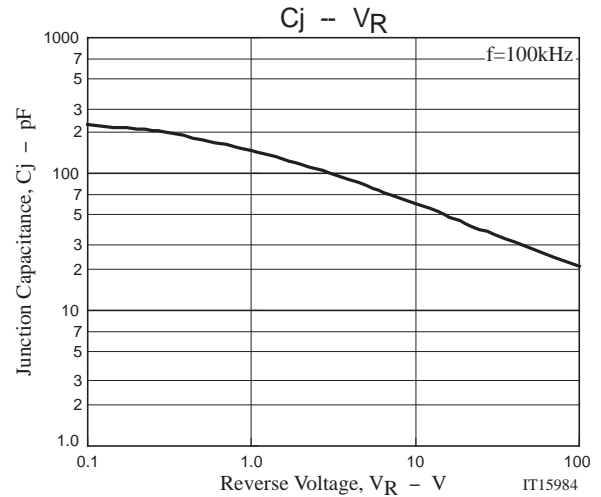
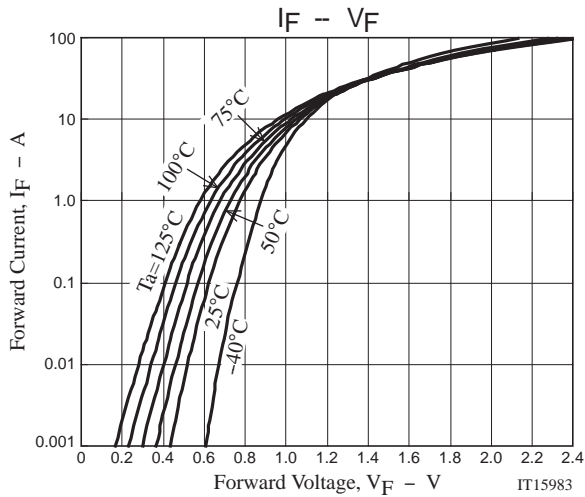
# UD2006FR

## Electrical Characteristics at $T_a=25^{\circ}\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=1\text{mA}$	600			V
Forward Voltage	$V_F$	$I_F=20\text{A}$		1.2	1.4	V
Reverse Current	$I_R$	$V_R=600\text{V}$			20	$\mu\text{A}$
Reverse Recovery Time	$t_{rr1}$	$I_F=10\text{A}$ , $di/dt=100\text{A}/\mu\text{s}$		75	150	ns
	$t_{rr2}$	$I_F=0.5\text{A}$ , $I_R=1\text{A}$		60		ns
Thermal Resistance	$R_{th(j-c)}$	Junction -Case : Smoothed DC			4	$^{\circ}\text{C} / \text{W}$

## Electrical Characteristics at $T_a=125^{\circ}\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Current	$I_R$	$V_R=600\text{V}$			200	$\mu\text{A}$



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