



UD2006FR

Planar Ultrafast Rectifier Low VF type, 20A, 600V, 1.4V, TO-220F-2FS

ON Semiconductor®

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Features

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

Specifications

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

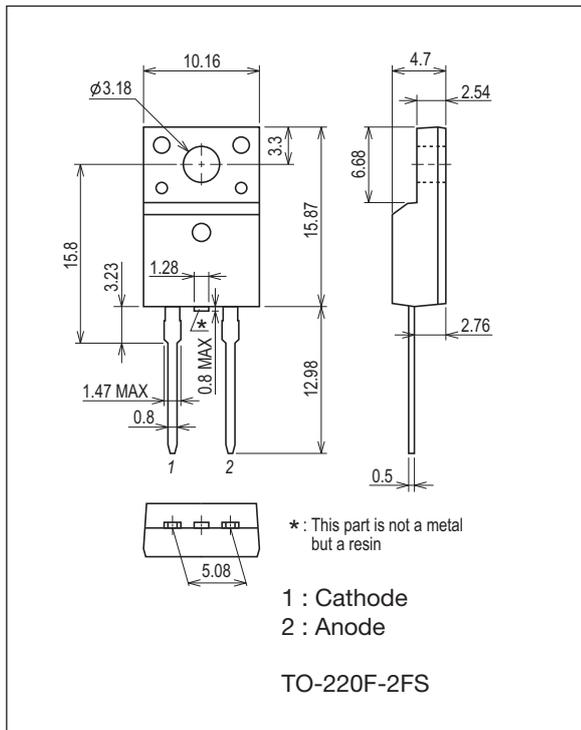
Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	DC bias	600	V
Average Output Current	I_O	50Hz resistive load, Sine wave $T_c=32^\circ C$	20	A
R.M.S Forward Current	$I_F(RMS)$	$T_c=25^\circ C$ (SANYO's ideal heat dissipation condition) Package limited, DC	24	A
Surge Forward Current	I_{FSM}	50Hz sine wave 1pulse	180	A
Junction Temperature	T_j		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Package Dimensions

unit : mm (typ)

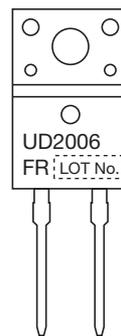
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Product & Package Information

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

Marking



Electrical Connection



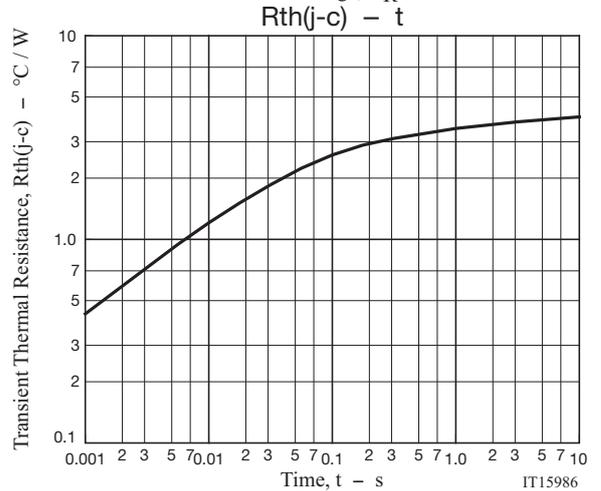
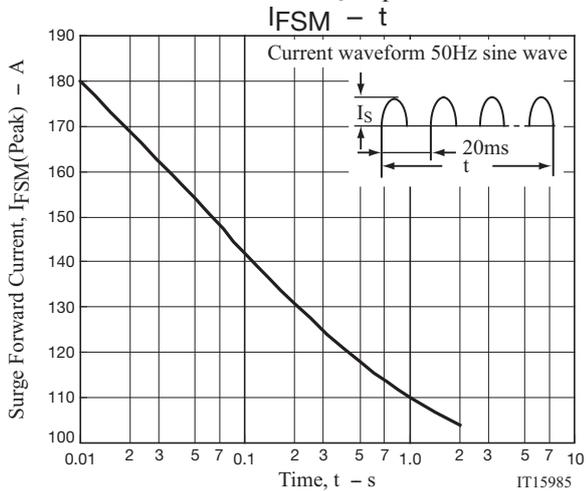
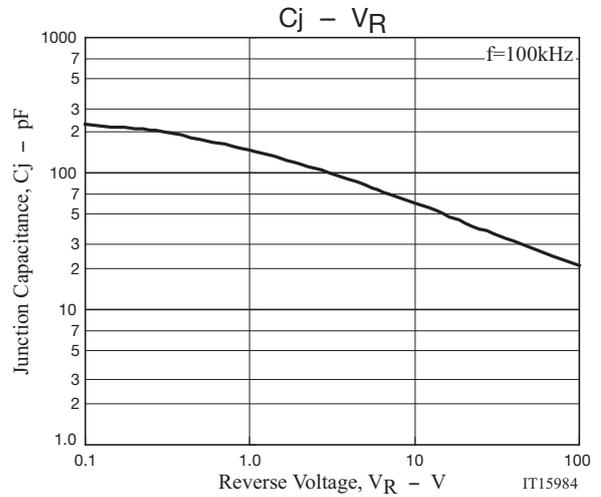
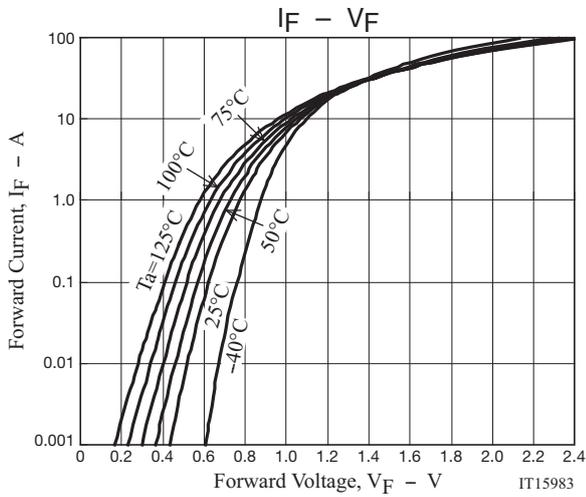
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Electrical Characteristics at $T_a=25^\circ\text{C}$

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	μA
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	μA



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