



# UD1006FR

## Planar Ultrafast Rectifier Low VF type, 10A, 600V, 1.3V, TO-220F-2FS

ON Semiconductor®

<http://onsemi.com>

### Features

- VRRM=600V
- VF=1.3V max (IF=10A)
- t<sub>rr</sub>=60ns(typ) (IF=0.5A, IR=1A)
- Halogen free compliance

### Specifications

Absolute Maximum Ratings at Ta=25°C

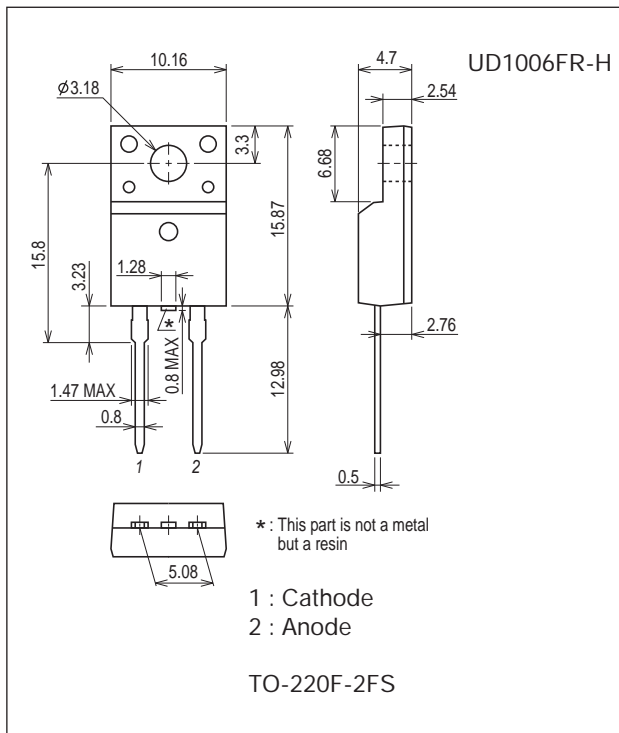
Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	VRRM		600	V
Nonrepetitive Peak Reverse Surge Voltage	VRSM		600	V
Average Output Current	I <sub>O</sub>	50Hz resistive load, Sine wave Tc=79°C	10	A
R.M.S Forward Current	I <sub>F</sub> (RMS)	Tc=25°C (SANYO's ideal heat dissipation condition) Package limited	18	A
Surge Forward Current	I <sub>FSM</sub>	Sine wave 10ms 1pulse	120	A
Junction Temperature	T <sub>j</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°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)

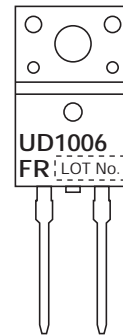
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### Product & Package Information

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

### Marking



### Electrical Connection



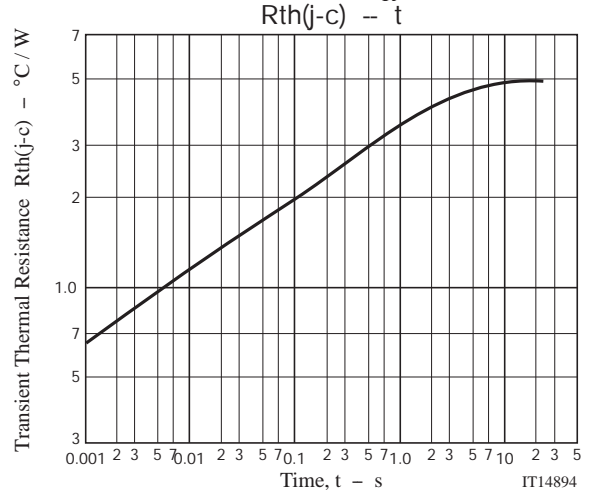
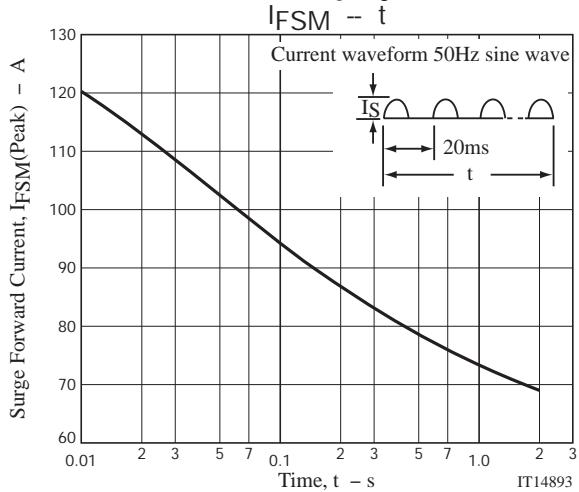
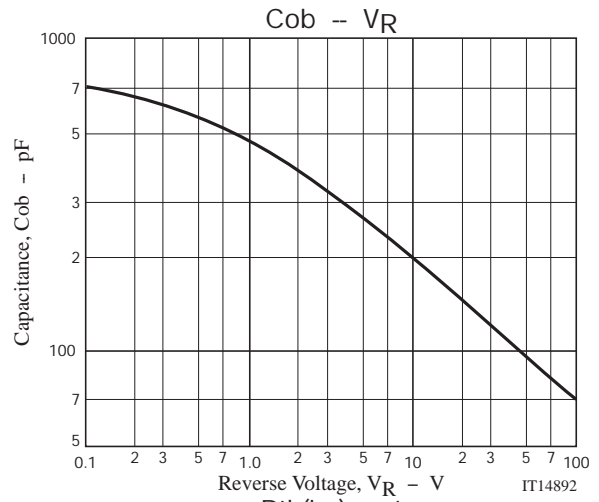
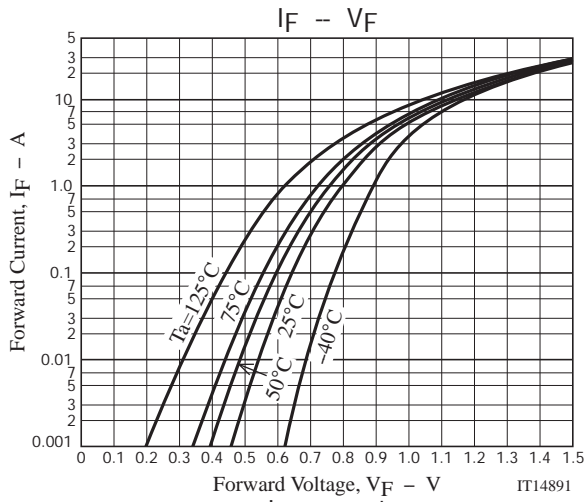
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## Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=1mA$	600			V
Forward Voltage	$V_F$	$I_F=10A$		1.1	1.3	V
Reverse Current	$I_R$	$V_R=600V$			100	$\mu A$
Reverse Recovery Time	$t_{rr1}$	$I_F=10A, di/dt=100A/\mu s$		100	150	ns
	$t_{rr2}$	$I_F=0.5A, I_R=1A$		60		ns
Thermal Resistance	$R_{th(j-c)}$	Junction -Case : Smoothed DC			4.9	$^{\circ}C/W$

## Ordering Information

Device	Package	Shipping	memo
UD1006FR-H	TO-220F-2FS	50pcs./magazine	Pb Free and Halogen Free



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## Magazine Specification

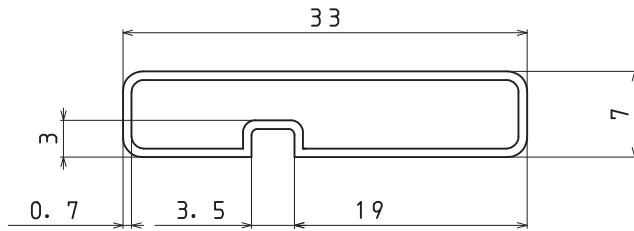
UD1006FR-H

### 1. Packing Format

Package Name	Magazine Name	Maximum Number of devices contained (pcs)			Packing format	
		Magazine	Inner box	Outer box	Inner BOX	Outer BOX
TO-220F-2FS	TO-220F	50	1,000	4,000	SPD-0V0001 20 magazines contained Dimensions:mm (external) 568×150×55	SPT-081029 4 inner boxes contained Dimensions:mm (external) 590×225×178

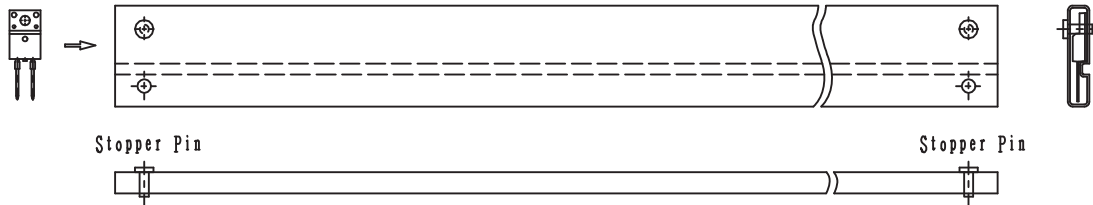
### 2. Magazine dimensions

(unit:mm)

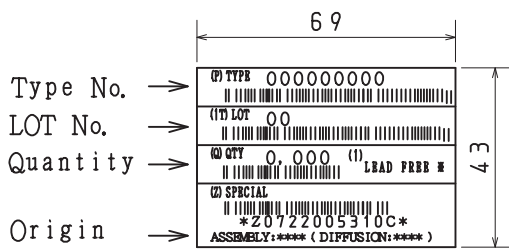


Tolerance=±0.3mm  
 Thickness=0.7±0.2mm  
 Length =532.5±2mm  
 Material =PVC (Antistatic treatment)

### 3. Storage method to magazine

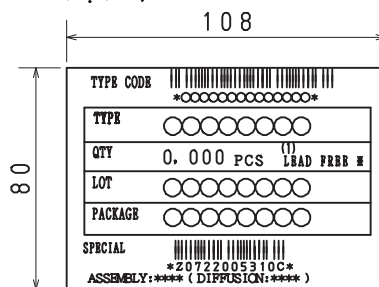


### 4. Inner box label (unit:mm)



### 5. Outer box label (unit:mm)

It is a label at the time of factory shipments.  
 The form of a label may change in physical  
 distribution process.



**NOTE (1)**

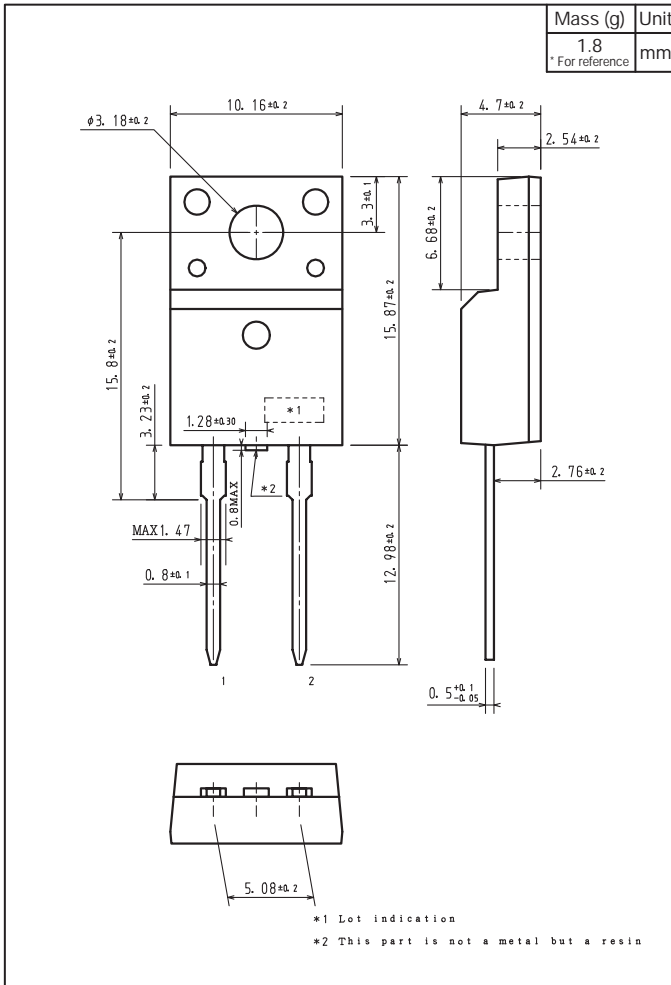
The LEAD FREE # description shows that the surface treatment of the terminal is lead free.

Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A

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## Outline Drawing

### UD1006FR-H



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