

# UD1006FR — Diffused Junction Silicon Diode

## Low VF Switching Diode

### Features

- $V_{RRM}=600V$
- $t_{rr}=60ns$ (typ) ( $I_F=0.5A$ ,  $I_R=1A$ )
- $V_F=1.3V$  max ( $I_F=10A$ )
- Halogen free compliance

### Specifications

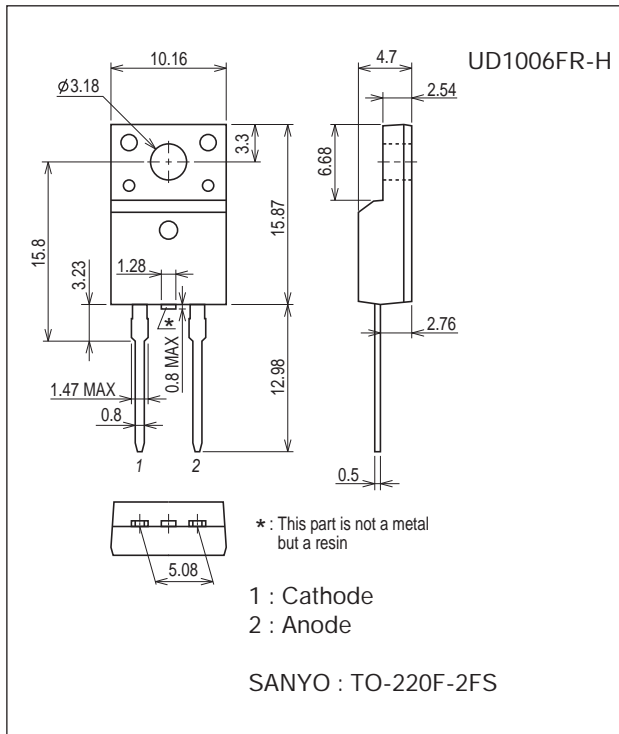
Absolute Maximum Ratings at  $T_a=25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$		600	V
Nonrepetitive Peak Reverse Surge Voltage	$V_{RSM}$		600	V
Average Output Current	$I_O$	50Hz resistive load, Sine wave $T_c=79^\circ C$	10	A
R.M.S Forward Current	$I_F(RMS)$	$T_c=25^\circ C$ (SANYO's ideal heat dissipation condition) Package limited	18	A
Surge Forward Current	$I_{FSM}$	Sine wave 10ms 1pulse	120	A
Junction Temperature	$T_j$		150	$^\circ C$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ C$

### Package Dimensions

unit : mm (typ)

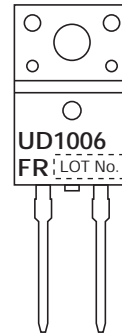
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### Product & Package Information

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

### Marking



### Electrical Connection



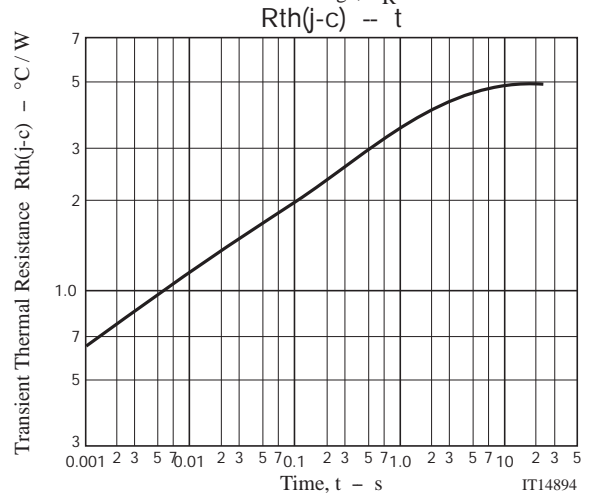
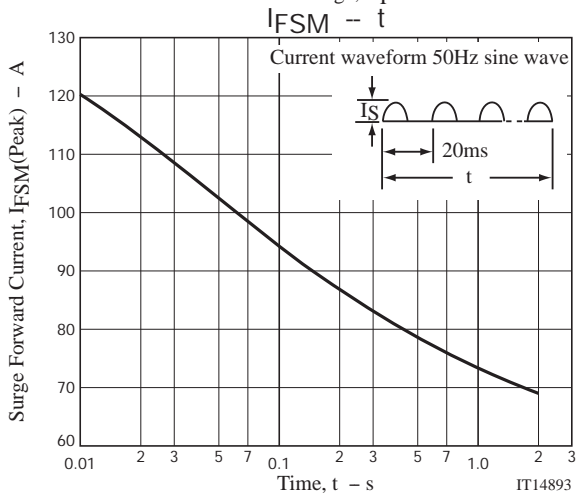
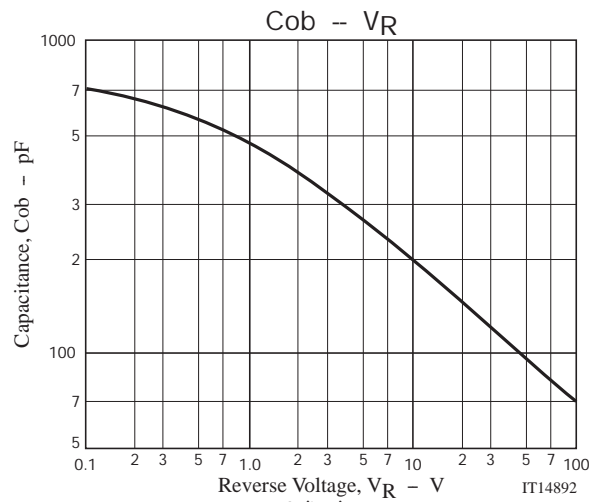
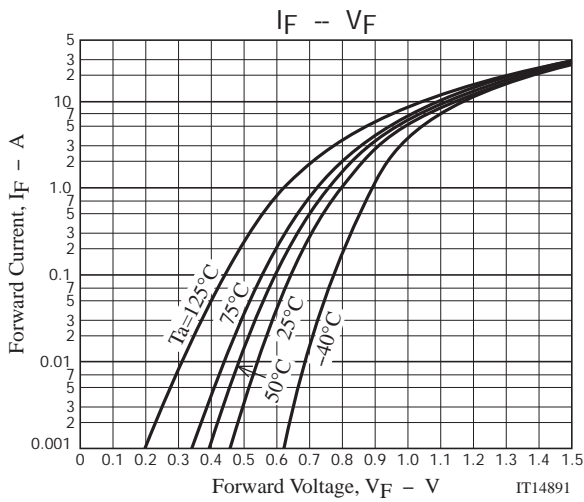
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## Electrical Characteristics at Ta=25°C

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

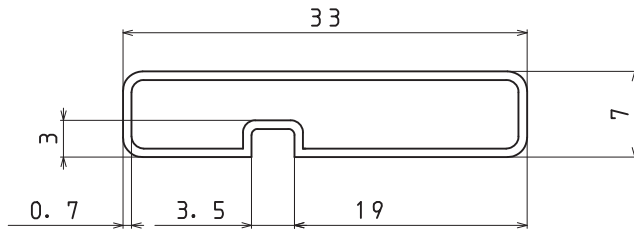
UD1006FR-H

### 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

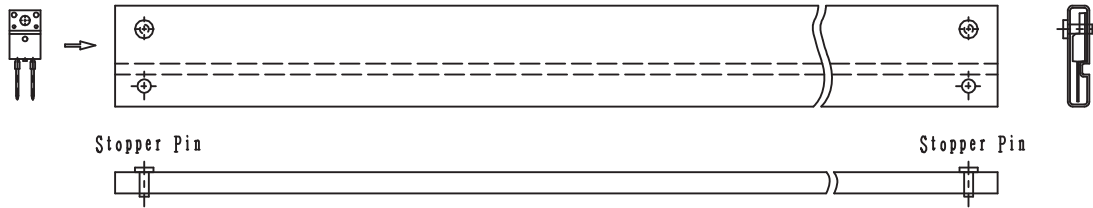
### 2. Magazine dimensions

(unit:mm)

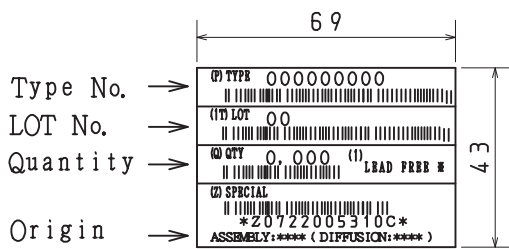


Tolerance=±0.3mm  
 Thickness=0.7±0.2mm  
 Length =532.5±2mm  
 Material =PVC (Antistatic treatment)

### 3. Storage method to magazine

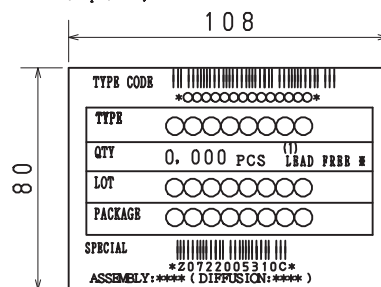


### 4. Inner box label (unit:mm)



### 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)**

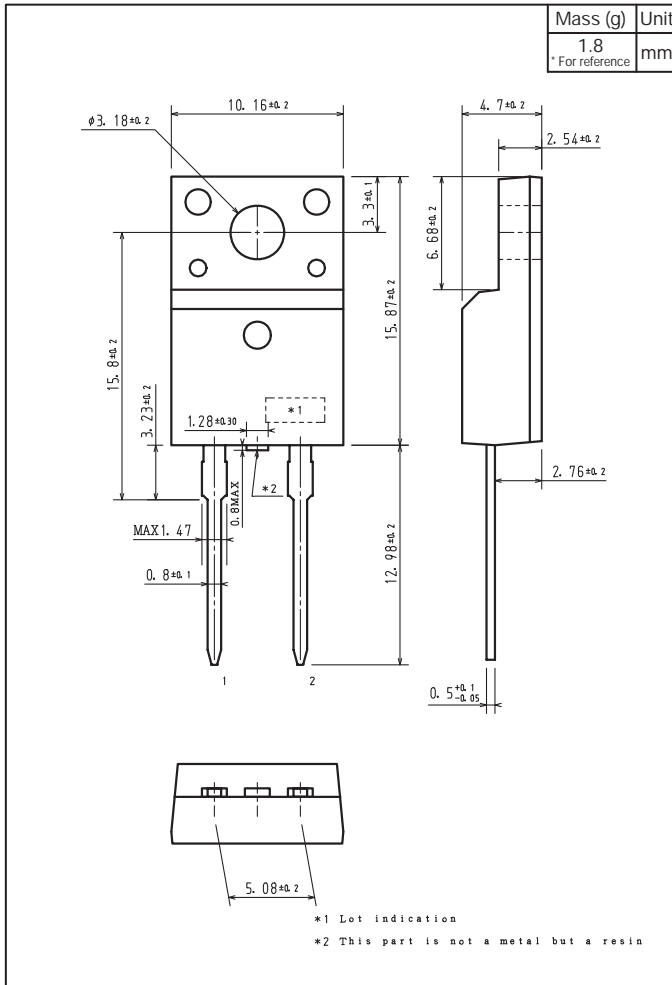
The LEAD FREE # description shows that the surface treatment of the terminal is lead free.

Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A

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## Outline Drawing

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