



UD1006FR

Planar Ultrafast Rectifier

Low VF type, 10A, 600V, 1.3V, TO-220F-2FS

ON Semiconductor®

<http://onsemi.com>

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 $T_a=25^\circ C$

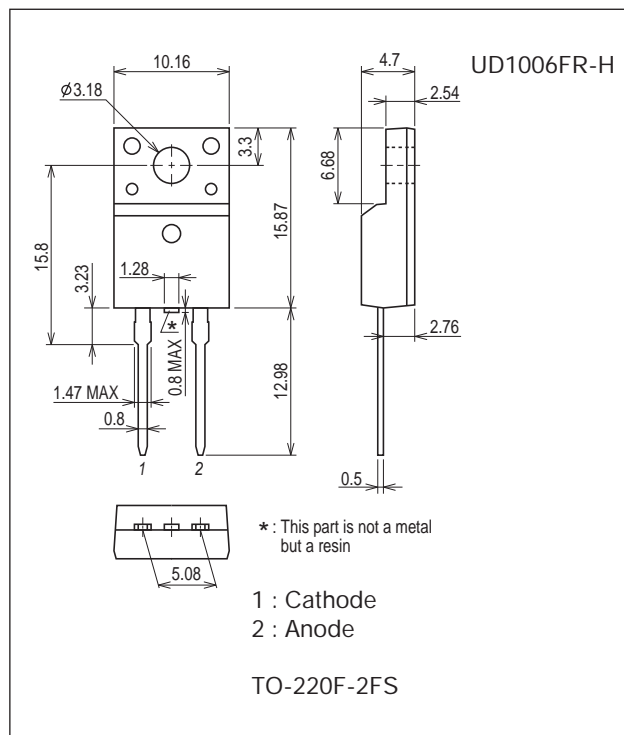
Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V_{RRM}		600	V
Nonrepetitive Peak Reverse Surge Voltage	V_{RSM}		600	V
Average Output Current	I_O	50Hz resistive load, Sine wave $T_c=79^\circ C$	10	A
R.M.S Forward Current	$I_F(RMS)$	$T_c=25^\circ C$ (SANYO's ideal heat dissipation 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	$^\circ C$

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)

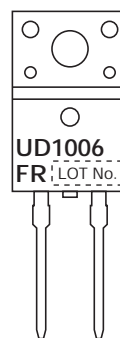
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Product & Package Information

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

Marking



Electrical Connection



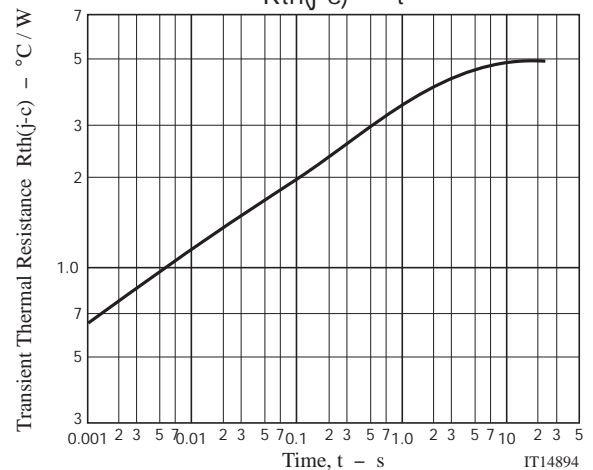
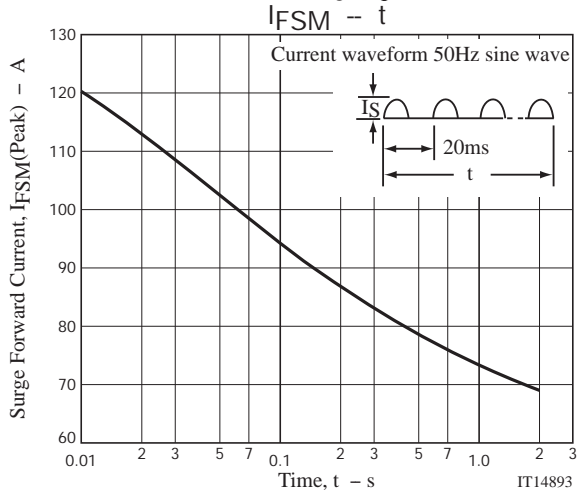
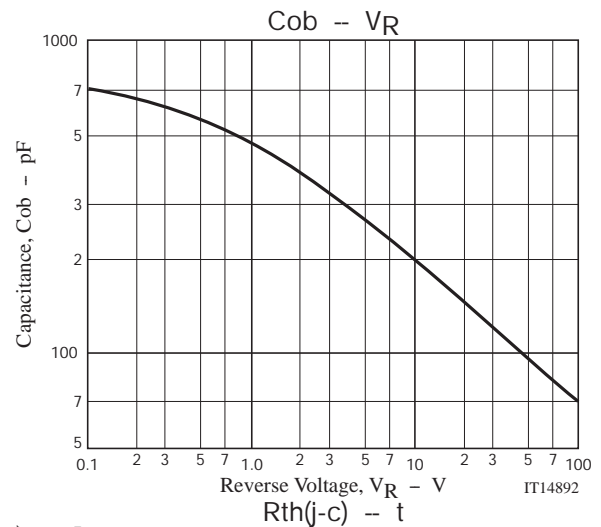
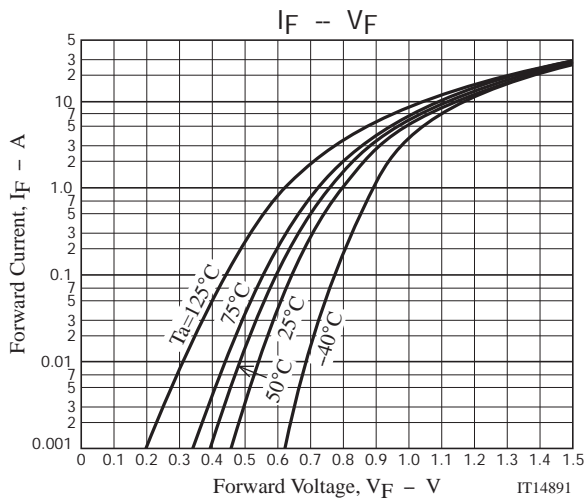
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Electrical Characteristics at Ta=25°C

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	μA
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



Magazine Specification

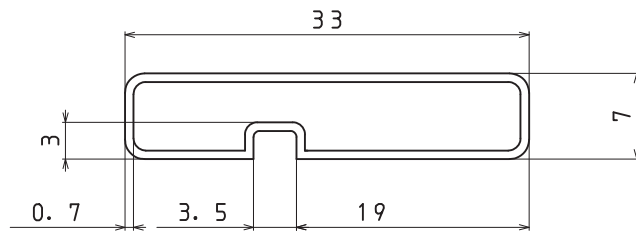
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1. Packing Format

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

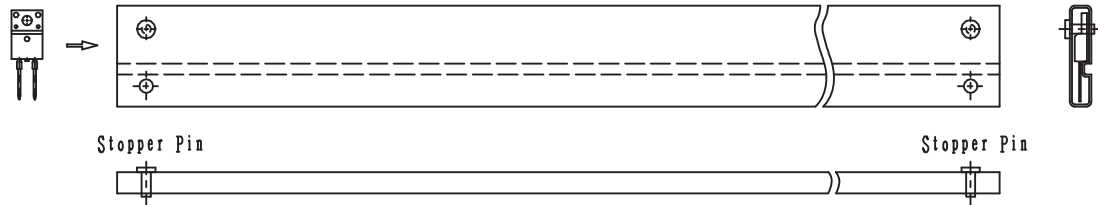
2. Magazine dimensions

(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)

Type No. →	(1) TYPE 000000000
LOT No. →	(1) LOT 00
Quantity →	(1) QTY 0,000 (1) LEAD FREE *
Origin →	(2) SPECIAL *Z0722005310C* ASSEMBLY:*** (DIFFUSION:***)

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.

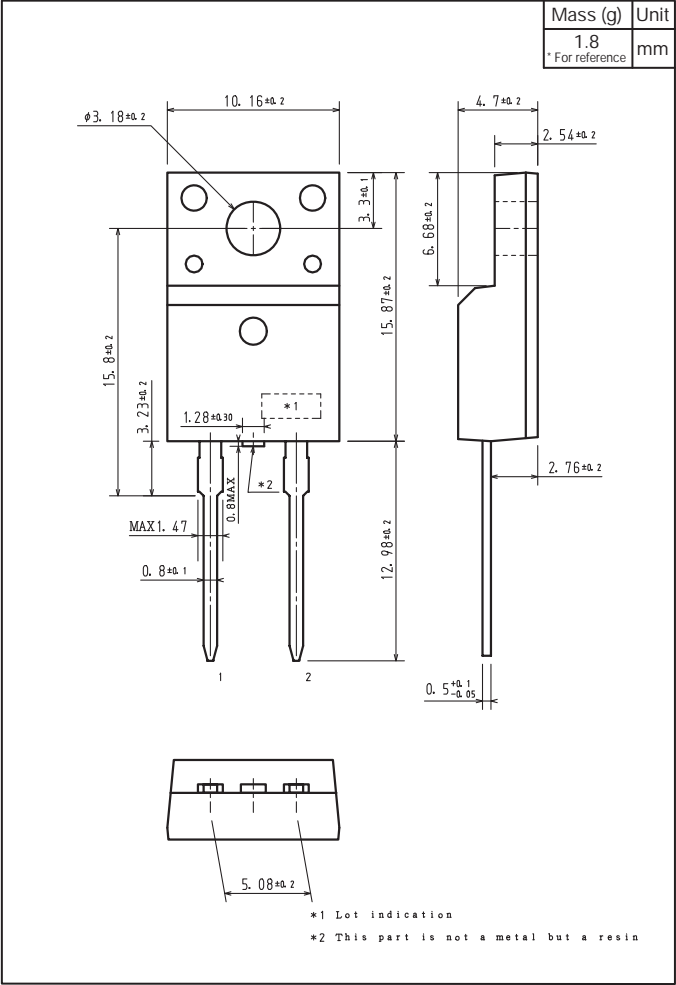
	TYPE CODE
	0000000000000000
	TYPE 00000000
	QTY 0,000 PCS (1) LEAD FREE *
	LOT 00000000
	PACKAGE 00000000
	SPECIAL
	Z0722005310C
	ASSEMBLY:*** (DIFFUSION:***)

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

Outline Drawing
UD1006FR-H



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