USF301 Product Data

High voltage rectifier diodes **USF301** series adopt high reliable mesa structure and diffusion craftwork, epoxy resin molded in a compact structure.

■ Feature

- Avalanche characteristic
- More sizes to choose
- epoxy resin molded in vacuum, have anticorrosion in the surface
- Operating Junction Temperature Tj: -40℃—+175℃

■ Application

- High voltage rectifier used in electrostatic cleaning
- High voltage generator
- High voltage testing equipment
- General purpose high voltage rectifier, voltage multiplier assembly

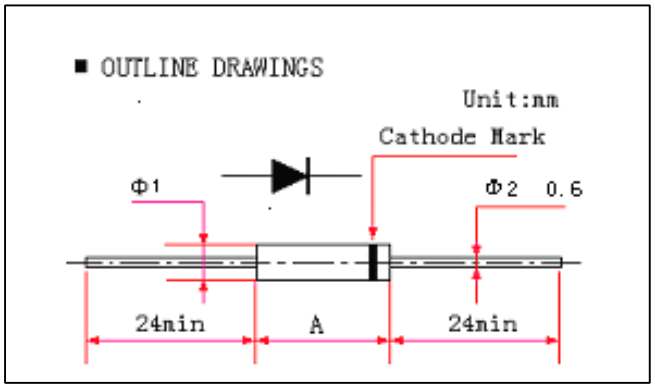
■ Maximum Ratings

Item	Symbol	Conditions		Unit
			USF301	
Repetitive Peak Reverse Voltage	V_{RRM}	Ta=25℃ I_R=0.5μA	30	kV
Average Forward Current	I_O		1000	mA
Surge Forward Current	I_{FSM}	50Hz Half-sine Wave , Resistance load @T_{break}=50℃	20	A
Operating Junction Temperature	Tj	Halfsine wave peak voltage	175	℃
Operating Ambient Temperature	Tc		150	℃
Storage Temperature	Tstg		-40—120	℃

■ Electrical Characteristics

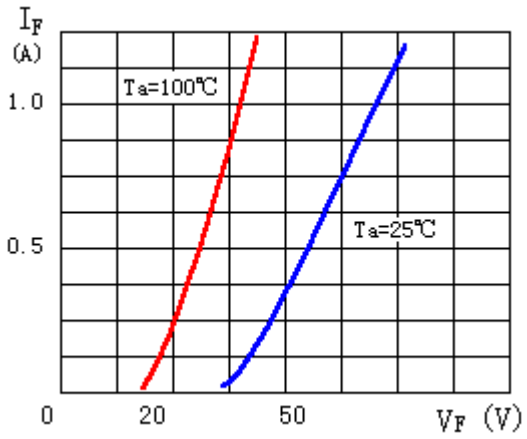
Rated Value	Symbol	Conditions		Unit
			USF301	
Forward Peak Voltage Max	V	I_F=5mA	65	V
Reverse Recovery Time Max	Trr	I_F=2mA I_R=4mA	60	nS
Peak Reverse Current (Reference Value)	I_{R1}	V_R=V_{RRM} ， 25℃	2.0	μA
	I_{R2}	V_R=V_{RRM} ， 100℃	5.0	μA
Junction Capacitance Max	Cj		2	pF

■ Dimensions (Unit: mm)

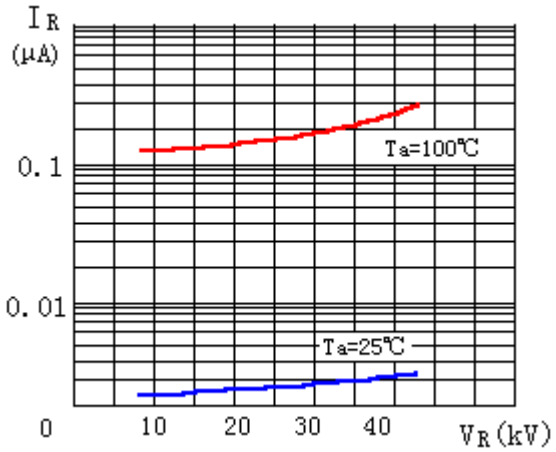


Type	A	Φ1	Φ2
USF301	40	8	1.2*22

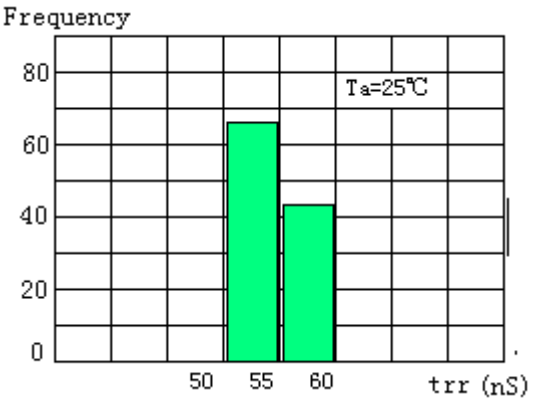
■ Characteristic Curve



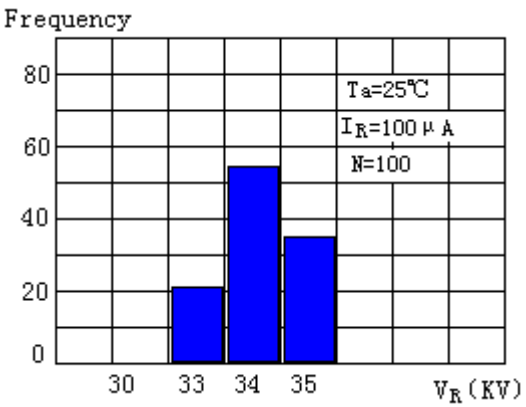
Forward Characteristics

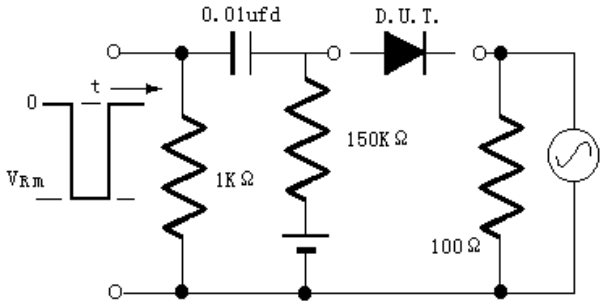
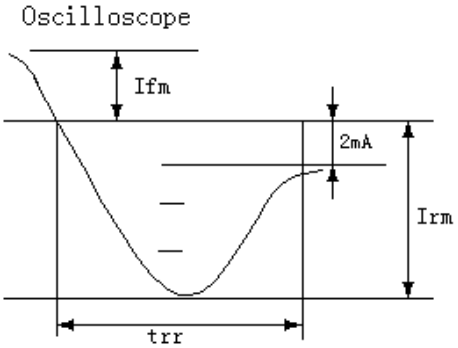


Reverse Characteristics



Reverse Recovery Time Distribution



Avalanche Breakdown Voltage Distribution

Reverse Recovery Time Basic Test Circuit