



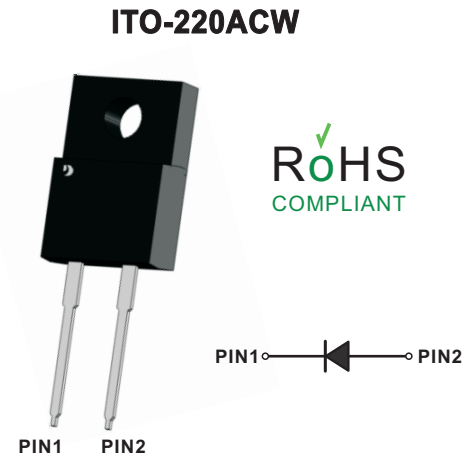
**Fast Recovery EPI Diodes**  
**Reverse Voltage - 1000 Volts**  
**Forward Current - 8 Amperes**

**Features**

- High frequency operation
- High surge forward current capability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

**Mechanical Data**

- Case: ITO-220ACW
- Approx Weight: 1.483g ( 0.052oz)
- RoHS compliant
- Case Material: “Green” molding compound, UL flammability classification 94V-0, “Halogen-free”.



**Maximum Ratings And Electrical Characteristics**

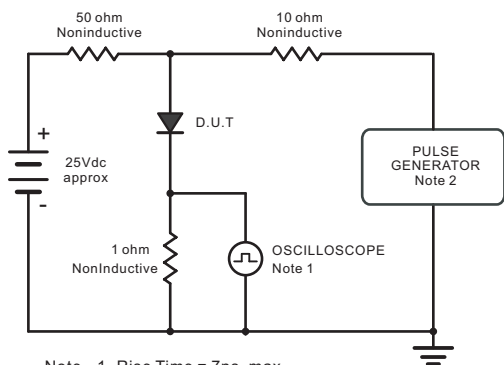
Ratings At 25°C Ambient Temperature Unless Otherwise Specified

Parameter	Symbols	US8100F	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	1000	V
Maximum RMS voltage	$V_{RMS}$	700	V
Maximum DC blocking Voltage	$V_{DC}$	1000	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	8	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	100	A
Instantaneous forward voltage at 8 A	$V_F$	1.8	V
Maximum Reverse Recovery Time <sup>(1)</sup>	$t_{rr}$	75	ns
Maximum instantaneous reverse current at rated DC blocking voltage $T_j=25^{\circ}C$ $T_j=125^{\circ}C$	$I_R$	10 500	uA
Maximum Thermal Resistance Junction To Case	$R_{\theta JC}$	4.0	°C/W
Operation Junction Temperature and Storage Temperature	$T_j, T_{stg}$	-55 ~ +150	°C

NOTE 1:  $I_F=0.5A, I_R=1A, I_{rr}=0.25A$



Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7ns, max.  
Input Impedance = 1megohm, 22pF.  
2. Rise Time = 10ns, max.  
Source Impedance = 50 ohms.

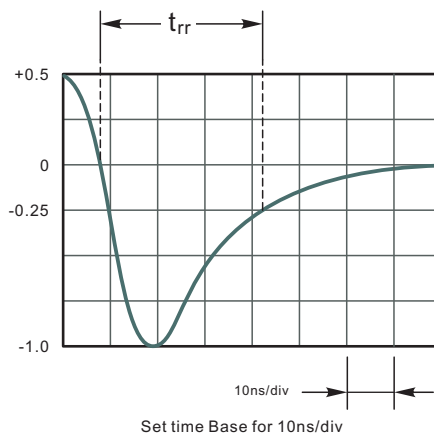


Fig.2 Typical Forward Current Derating Curve

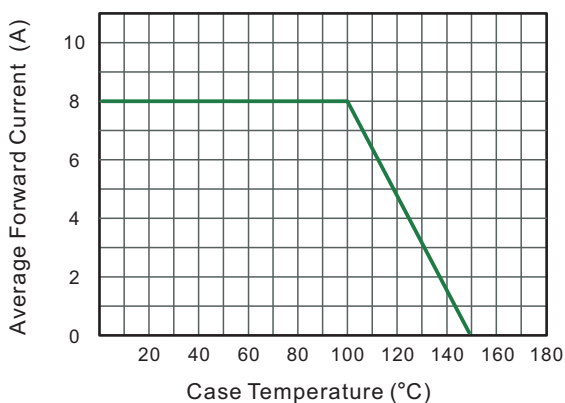


Fig.3 Typical Reverse Characteristics

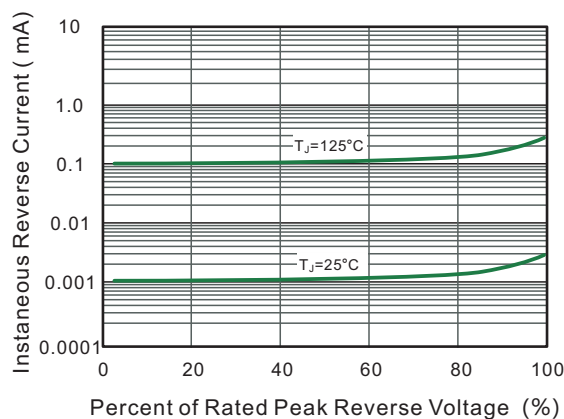


Fig.4 Typical Forward Characteristic

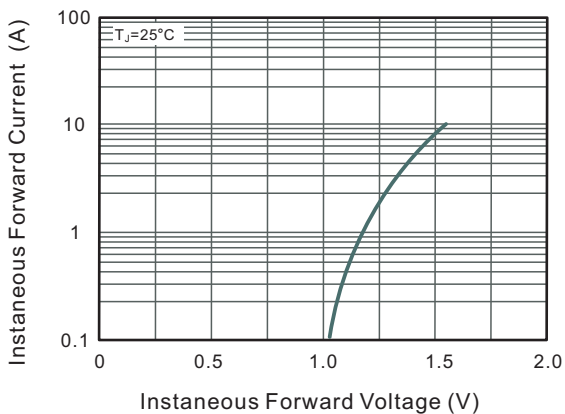
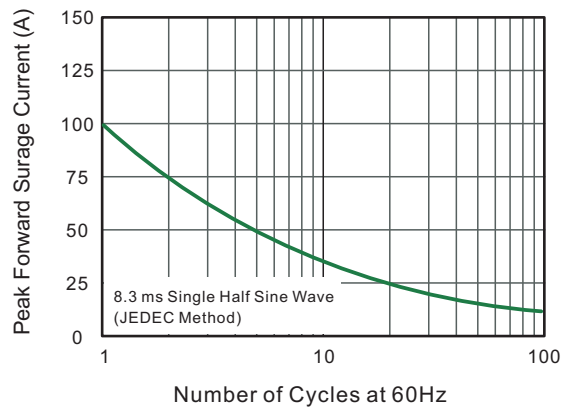


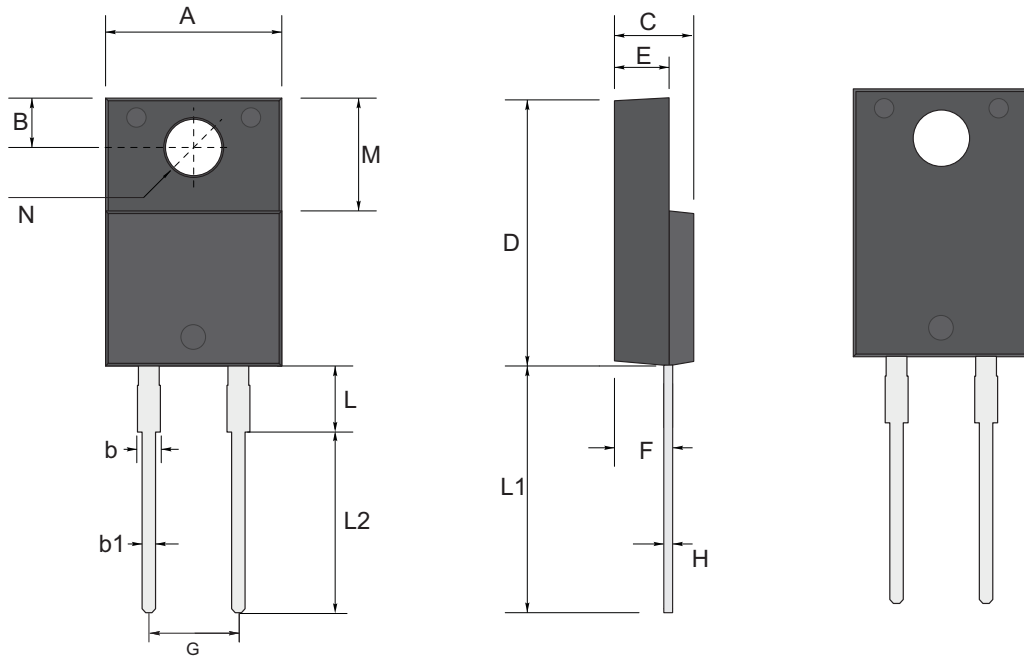
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current





Package Outline  
Through Hole Package ; 2 leads

ITO-220ACW



ITO-220ACW mechanical data

UNIT		A	B	b	b1	C	D	E	F	G	H	L	L1	L2	M	N
mm	max	10.5	2.85	1.4	0.8	4.7	16.0	2.9	3.55	5.1 typ.	0.70	2.9	14.3	11.8	7.0	3.4 typ.
	typ	10.0	2.70	1.2	0.6	4.5	15.0	2.7	3.25		0.55	2.5	13.5	11.0	6.8	
	min	9.85	2.54	1.1	0.5	4.4	14.7	2.5	2.95		0.41	2.3	13.0	10.5	6.3	
mil	max	413	112	55	31	185	630	114	140	201 typ.	28	114	563	465	276	134 typ.
	typ	394	106	47	24	177	591	106	128		22	98	531	433	268	
	min	388	100	43	20	173	579	98	116		16	91	512	413	248	

**Marking**

Type number	Marking code
US8100F	US8100F



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