



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

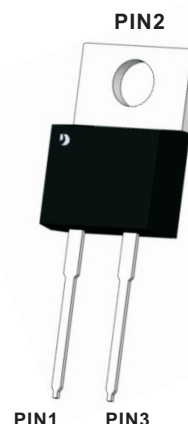
TO-220ACW

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: TO-220ACW
- Approx. Weight: 1.855g (0.065oz)
- RoHS compliant
- Case Material: “Green” molding compound, UL flammability classification 94V-0, “Halogen-free”.



Maximum Ratings And Electrical Characteristics

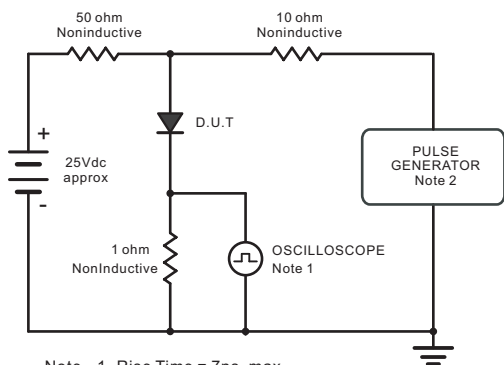
Ratings At 25°C Ambient Temperature Unless Otherwise Specified

Parameter	Symbols	US8100C	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 ⁽¹⁾	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	μA
Maximum Thermal Resistance Junction To Case	$R_{\theta JC}$	2.2	$^{\circ}C/W$
Operation Junction Temperature and Storage Temperature	T_j, T_{stg}	-55 ~ +150	$^{\circ}C$

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.

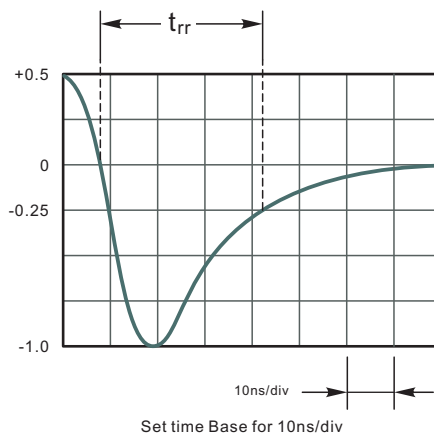


Fig.2 Typical Forward Current Derating Curve

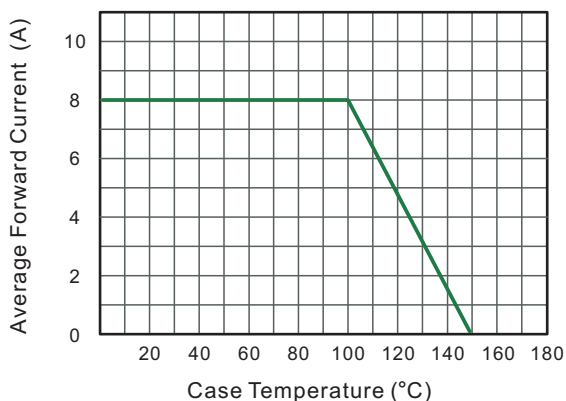


Fig.3 Typical Reverse Characteristics

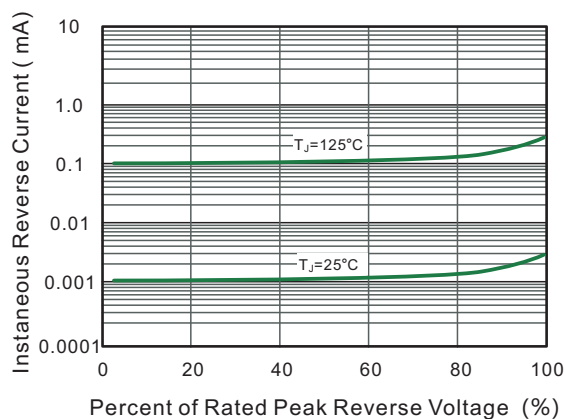


Fig.4 Typical Forward Characteristic

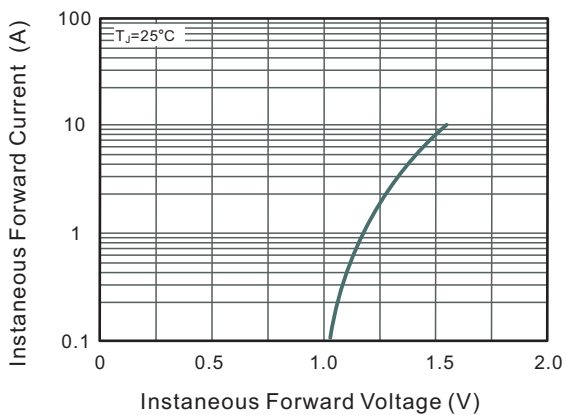
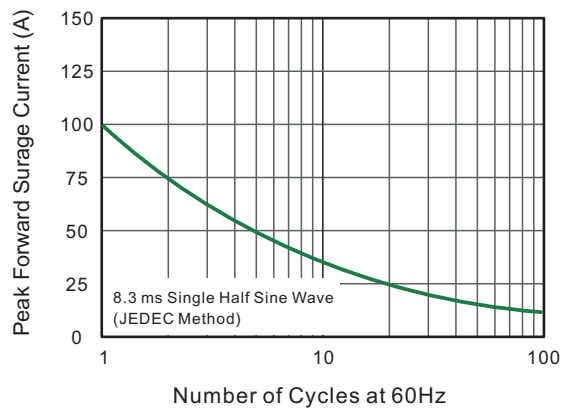


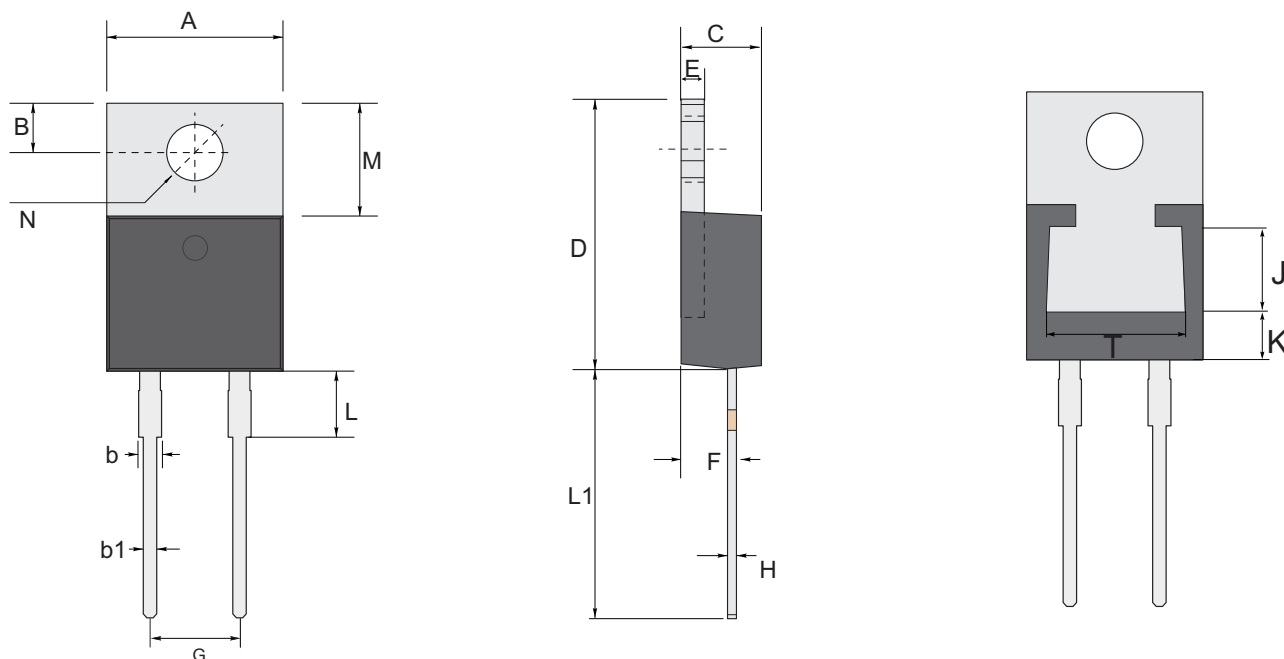
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current





Package Outline
Through Hole Package ; 2 leads

TO-220ACW



TO-220ACW mechanical data

UNIT		A	B	b	b1	C	D	E	F	G	H	L	L1	M	N	J	T	K
mm	max	10.45	2.94	1.77	0.94	4.76	16.0	1.40	3.37	5.1 typ.	0.64	4.20	14.79	6.39 typ.	3.84 typ.	4.65 ref.	7.7 ref.	3.22 ref.
	typ	9.94	2.74	1.27	0.81	4.57	15.09	1.27	3.07		0.38	3.89	13.18					
	min	9.85	2.54	1.14	0.62	4.42	14.6	1.14	2.77		0.35	2.80	13.08					
mil	max	411	116	70	37	187	630	55	133	201 typ.	25	165	582	252 typ.	151 typ.	183 ref.	303 ref.	127 ref.
	typ	391	108	50	32	180	594	50	121		15	153	519					
	min	388	100	45	24	174	575	45	109		14	110	515					

Marking

Type number	Marking code
US8100C	US8100C



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