

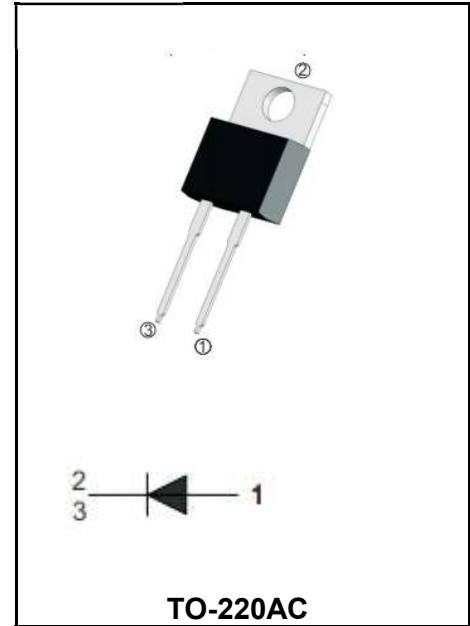
Fast Recovery Epi Diodes

Reverse Voltage - 600 V

Forward Current - 30 A

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
- ◆ Solder dip 275 °C max. 7s, per JESD 22-B106



Mechanical Data

- ◆ Case: TO-220AC
- ◆ Approx. Weight: 2.1g (0.074oz)
- ◆ Terminals: Lead solderable per MIL-STD-202, Method 208
- ◆ Lead free finish, RoHS compliant
- ◆ Case Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".

Maximum Ratings (Per Leg) At Ta=25°C Unless Otherwise Specified

Parameter	Symbols	Value	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	V
Maximum RMS voltage	V_{RMS}	420	V
Maximum DC Blocking Voltage	V_{DC}	600	V
Maximum Average Forward Rectified Current @Tc=100°C	$I_{F(AV)}$	30	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	300	A
Instantaneous forward voltage at 30A	V_F	1.6	V
Maximum instantaneous reverse current at rated DC blocking voltage	I_R	10 500	uA
Maximum Reverse Recovery Time NOTE 1	t_{rr}	35	nS
Maximum Thermal Resistance Junction To Case	$R_{\theta JC}$	4	°C/W
Operation Junction Temperature and Storage Temperature	T_J, T_{STG}	-55 ~ +150	°C

Note1: Reverse recovery test conditions IF=0.5A, IR=1.0A, Irr=0.25A

Ratings and Characteristic Curves

Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE

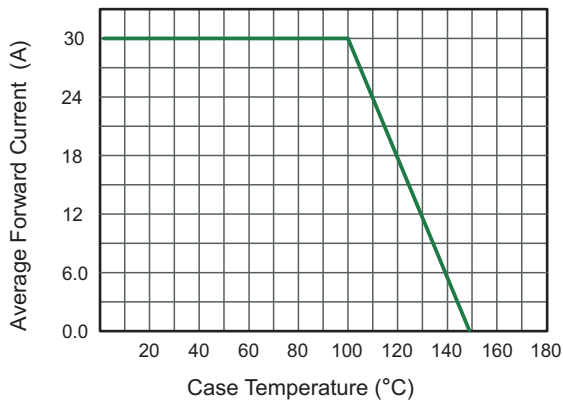


Fig.2 Typical Reverse Characteristics

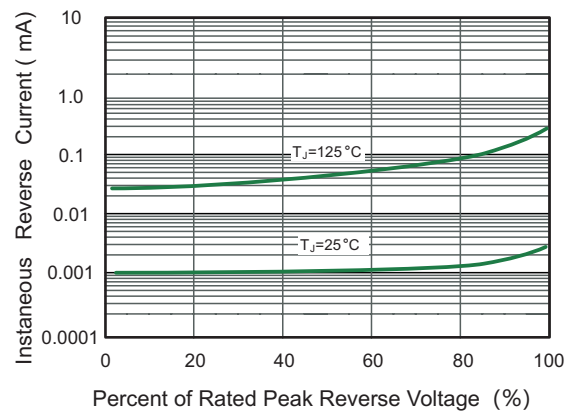


Fig.3 Typical Forward Characteristics

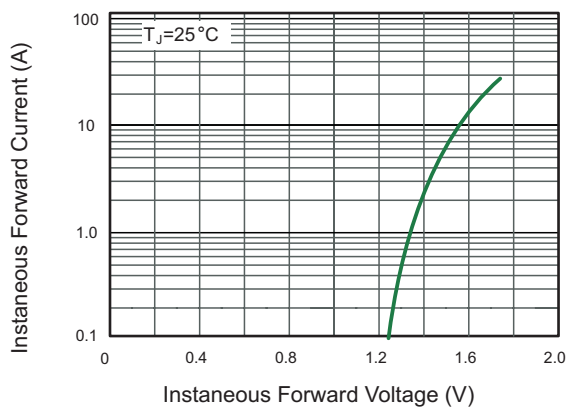
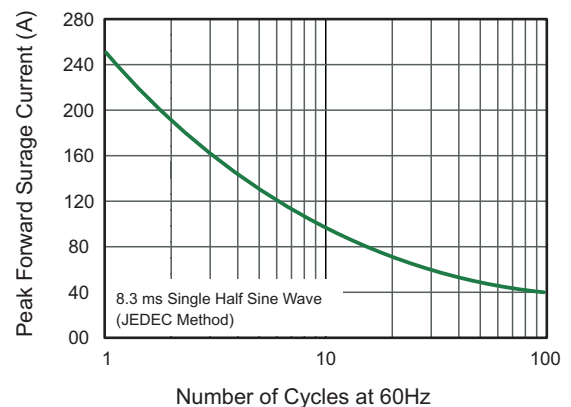
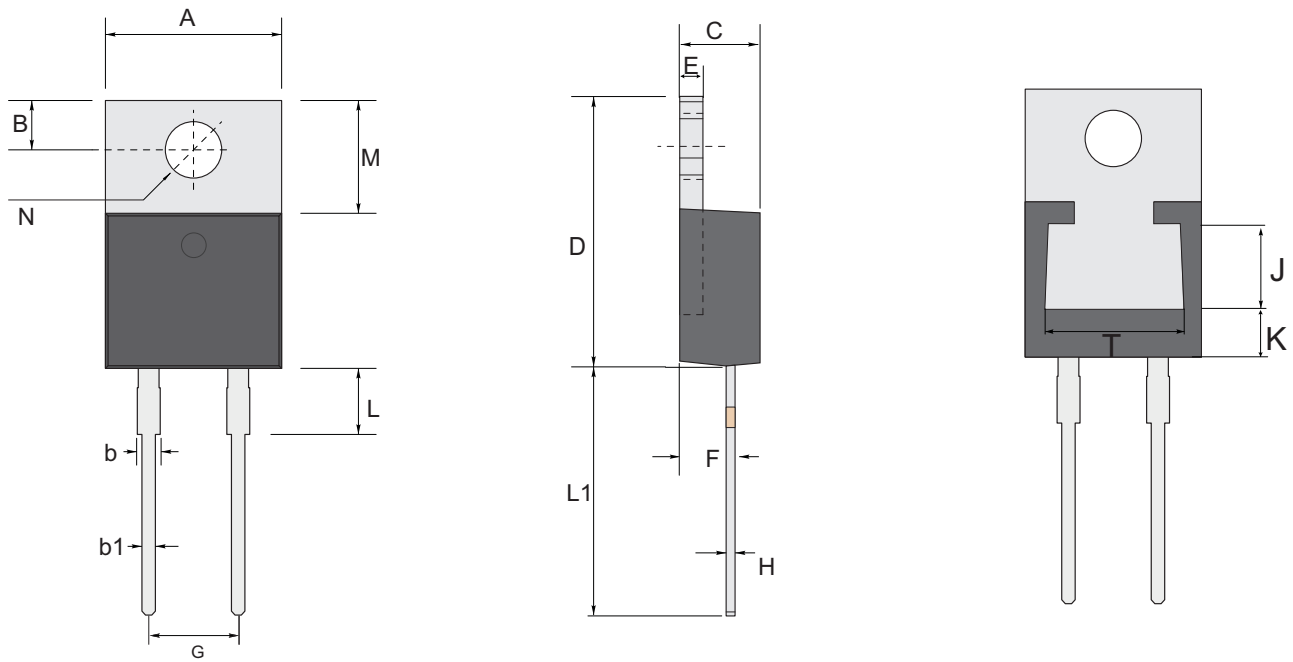


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



Package Outline Dimensions Millimeters



TO-220AC 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	2.80	5.1 TYPICAL	0.64	4.2	14.79	6.6 TYPICAL	3.8 TYPICAL	4.65 ref.	7.70 ref.	3.22 ref.
	typ	9.94	2.74	1.27	0.81	4.53	15.09	1.27	2.69		0.38	3.89	13.18					
	min	9.85	2.54	1.14	0.62	4.42	14.6	1.14	2.20		0.35	2.8	13.08					
mil	max	411	116	70	40	187	630	55	110	200 TYPICAL	25	165	582	259 TYPICAL	150 TYPICAL	1.83 ref.	303 ref.	126 ref.
	typ	391	107	50	31	178	594	50	105		15	153	519					
	min	388	100	45	24	174	575	45	87		14	110	515					