

**Fast Recovery Epi Diodes**

**Reverse Voltage - 600 V**

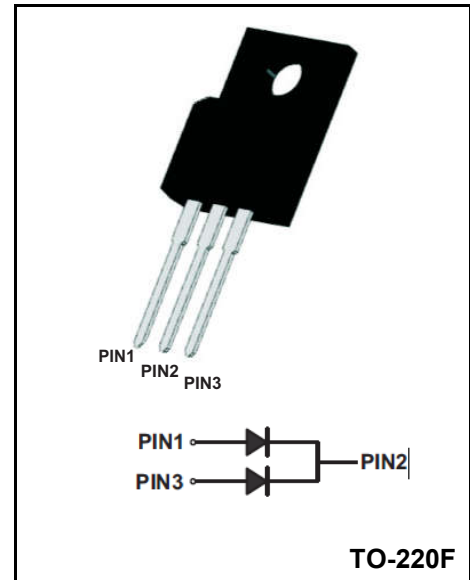
**Forward Current - 30 A**

**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-220F
- ◆ Approx. Weight: 1.7g ( 0.063oz)
- ◆ Lead free finish, RoHS compliant
- ◆ Case Material: “Green” molding compound, UL flammability classification 94V-0, “Halogen-free”.



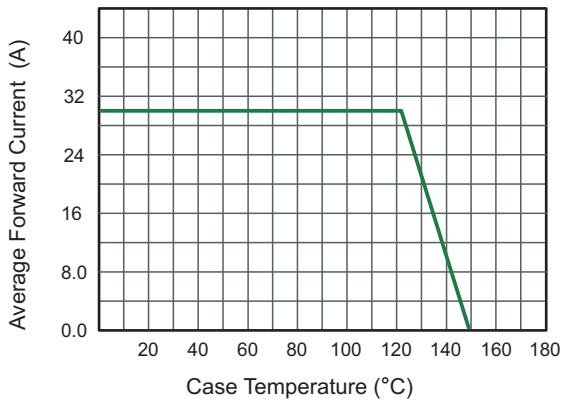
**Maximum Ratings (Per Leg) At Ta=25°C Unless Otherwise Specified**

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	Per Leg	$I_{F(AV)}$	15	A
	per device		30	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)		$I_{FSM}$	300	A
Instantaneous forward voltage at 15A per leg		$V_F$	1.6	V
Maximum instantaneous reverse current at rated DC blocking voltage		$I_R$	Ta=25°C 10	uA
			Ta=125°C 500	
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

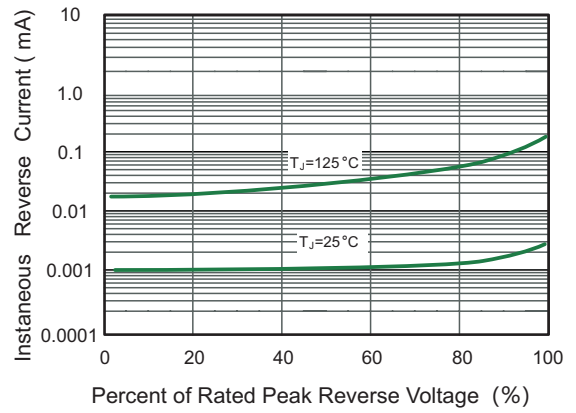
Note1: Reverse recovery test conditions IF=0.5A, IR=1.0A, Irr=0.25A

**Ratings and Characteristic Curves**

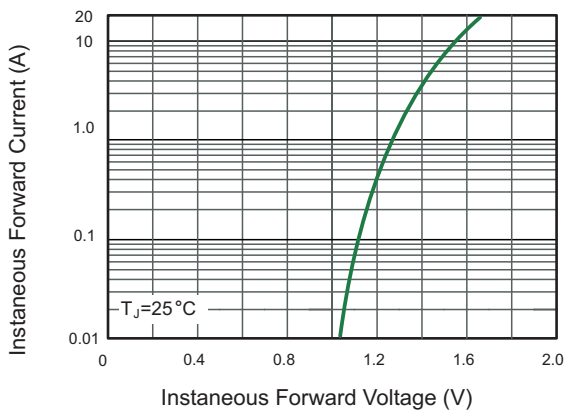
**Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE**



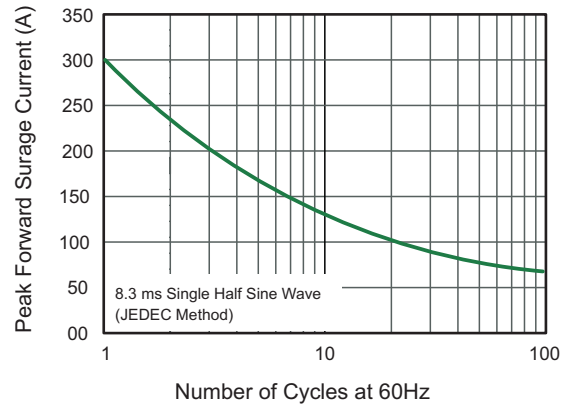
**Fig.2 Typical Reverse Characteristics**



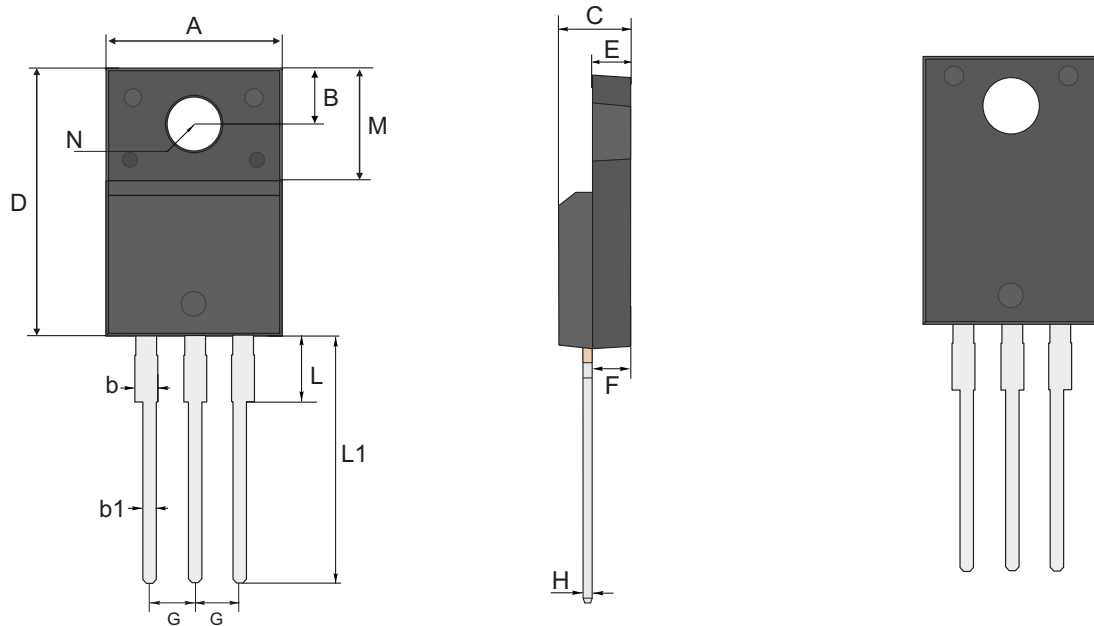
**Fig.3 Typical Forward Characteristics**



**Fig.4 Maximum Non-Repetitive Peak Forward Surge Current**



Package Outline Dimensions Millimeters



TO-220F

UNIT		A	B	b	b1	C	D	E	F	G	H	L	L1	M	N
mm	max	10.28	3.37	1.34	0.9	4.9	16.07	2.74	2.74	2.64	0.60	2.85	13.7	6.88	3.18 TYPICAL
	typ	10.18	3.27	1.24	0.8	4.7	15.87	2.54	2.54	2.54	0.50	2.65	13.5	6.68	
	min	10.08	3.17	1.14	0.7	4.5	15.67	2.34	2.34	2.44	0.40	2.45	13.3	6.48	
mil	max	405	133	53	35	193	630	108	108	104	27	112	539	271	125 TYPICAL
	typ	401	129	49	31	185	590	100	100	100	20	104	531	267	
	min	397	125	45	28	177	580	92	92	96	16	96	524	255	