

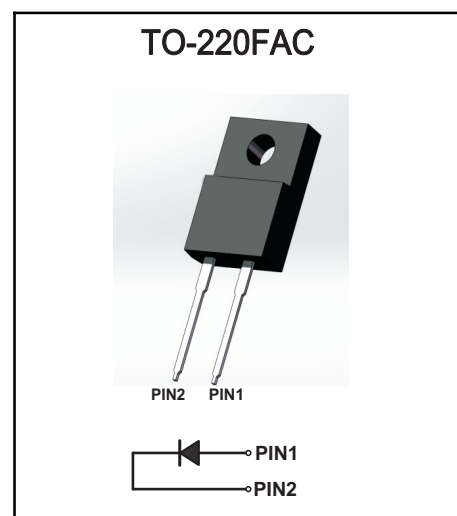
Fast Recovery Epi Diodes

Reverse Voltage - 600V

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-220FAC
- Approx. Weight: 2.15g (0.076oz)
- 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 per diode	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	μA
Maximum Reverse Recovery Time NOTE 1	t_{rr}	35	ns
Maximum Thermal Resistance Junction To Case	$R_{\theta JC}$	4	°C/W
Operating Temperature Range	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

NOTE 1: Reverse recovery test conditions $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$

RATINGS AND CHARACTERISTIC CURVES

Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE

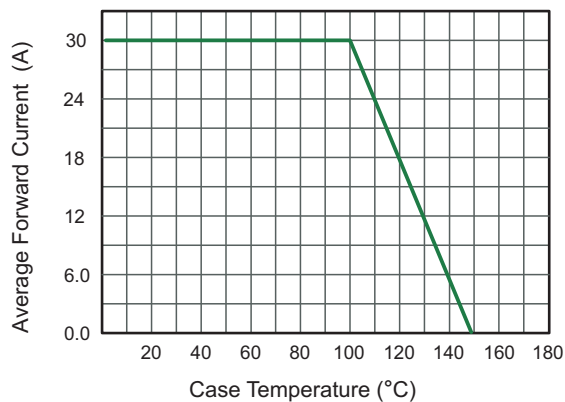


Fig.2 Typical Reverse Characteristics

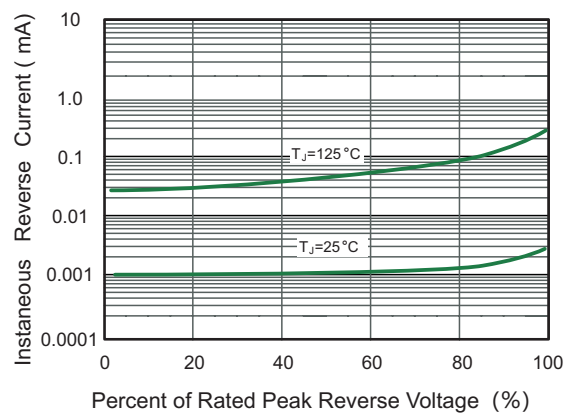


Fig.3 Typical Forward Characteristics

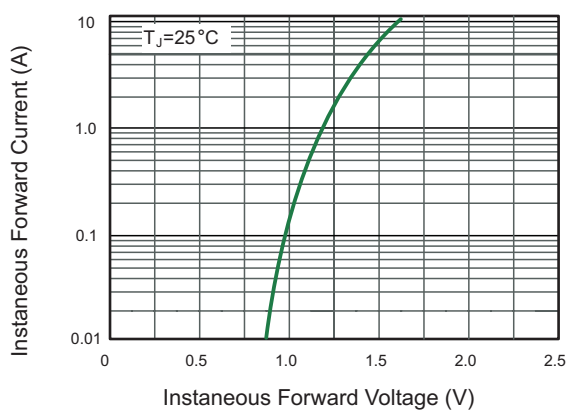
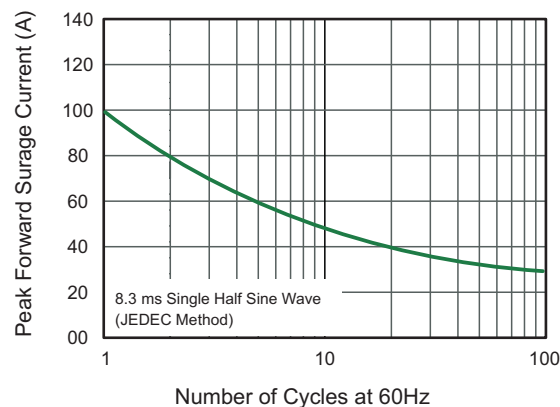


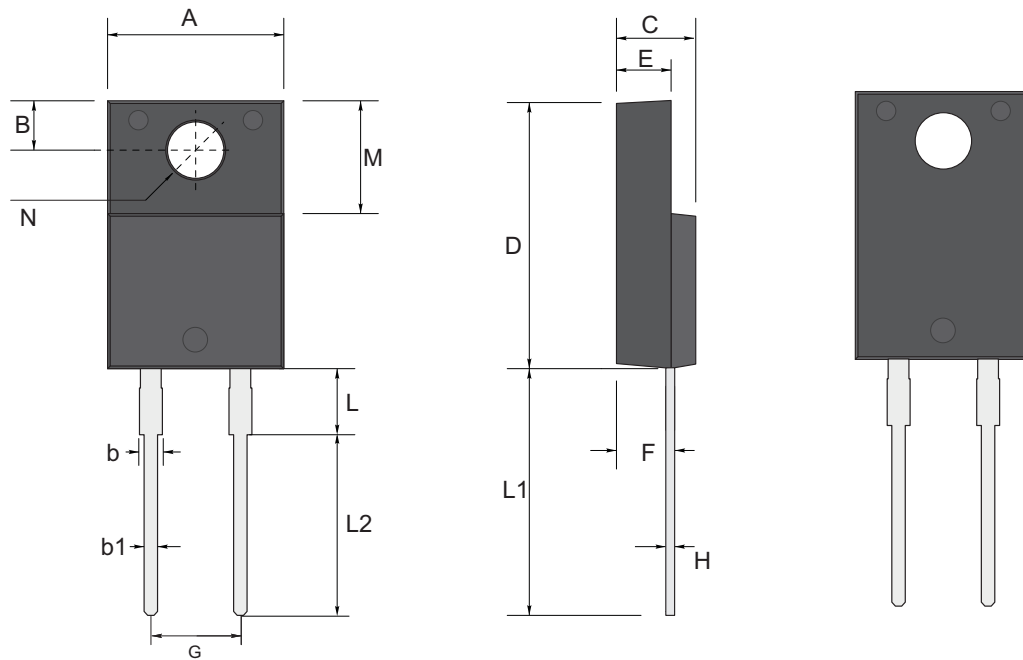
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



Package Outline Dimensions Millimeters

Through Hole Package ; 2 leads

TO-220FAC



TO-220FAC 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	