



## JEER2004FPL

## EPI SUPERFAST SOFT RECOVERY RECTIFIER

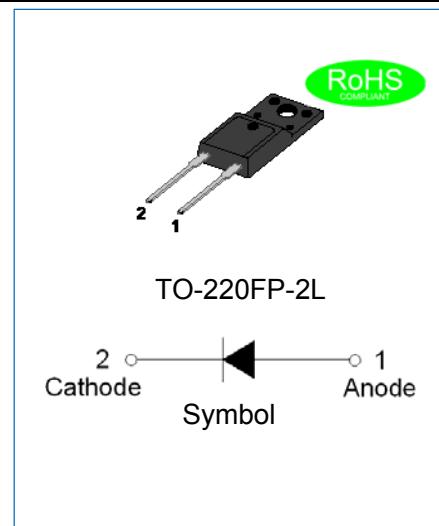
Rev.1.2

## DESCRIPTION

- ✧ Plastic package has underwriters laboratory flammability classification 94V-0
- ✧ Lead free in comply with EU RoHS 2011/65/EU directives
- ✧ Low reverse leakage current
- ✧ Superfast recovery time and soft recovery characteristics
- ✧ Low recovery loss

## MECHANICAL DATA

- ✧ Case: TO-220FP-2L molded plastic over passivated junction
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Weight:2gram



## ABSOLUTE MAXIMUM RATING (Rating at 25°C case temperature unless otherwise specified.)

Parameter	Symbol	JEER2004FPL	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	400	V
Maximum RMS voltage	V <sub>RMS</sub>	280	V
Maximum DC blocking voltage	V <sub>DC</sub>	400	V
Maximum average forward rectified current at T <sub>C</sub> =100°C	I <sub>F(AV)</sub>	20	A
Peak forward surge current:8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	200	A
Junction temperature and storage temperature range	T <sub>j</sub> , T <sub>stg</sub>	-55 to +175	°C

## ISOLATION CHARACTERISTICS

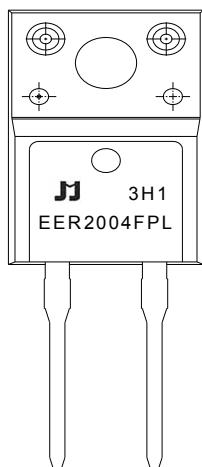
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V <sub>isol(RMS)</sub>	RMS isolation voltage	50Hz≤f≤60Hz;RH≤65%;from all pins to external heatsink; sinusoidal waveform; clean and dust free	-	-	2500	V
C <sub>isol</sub>	Isolation capacitance	From cathode to external heatsink	-	10	-	pF

**ELECTRICAL CHARACTERISTICS**(Rating at 25°C case temperature unless otherwise specified.)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Forward voltage @ $I_F=20A$	$V_F$	-	-	1.3	V
Maximum DC reverse current at rated DC blocking voltage	$I_R$	-	-	5	$\mu A$
$T_J=150^\circ C$		-	-	300	
Maximum reverse recovery time	$t_{rr}$	-	-	35	ns
$I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$					

**THERMAL RESISTANCES**

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-c)}$	Thermal resistance from junction to case	-	3	-	°C/W

**MARKING**

EER	EPI Superfast Recovery Rectifier	
20	$I_{F(AV)}=20A$	
04	$V_{RRM}:400V$	
FPL	Package:TO-220FP-2L	

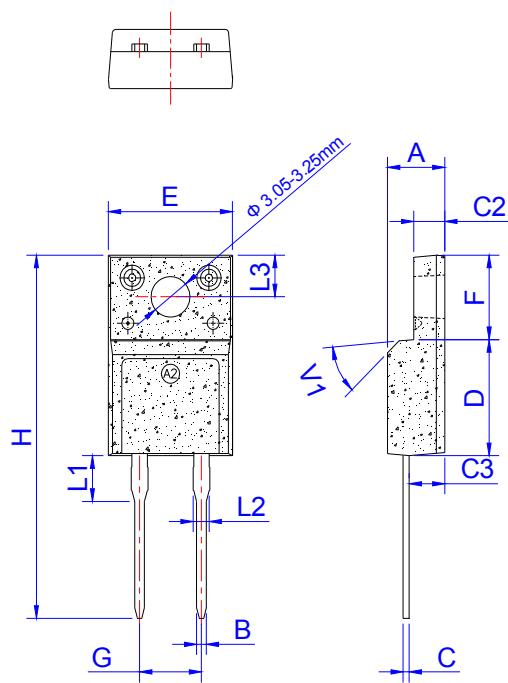
xH1: Month, 1、2、3 ~ 9、A、B、C3x1:

2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

3Hx: Batch number**ORDERING INFORMATION**

<u>J</u>	<u>E</u>	<u>E</u>	<u>R</u>	<u>20</u>	<u>04</u>	<u>FPL</u>	
JIEJIE Microelectronics	EPI Superfast Rectifier						Package: TO-220FP-2L

## PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.50		4.90	0.177		0.193
B	0.74	0.80	0.83	0.029	0.031	0.033
C	0.47		0.65	0.019		0.026
C2	2.45		2.75	0.096		0.108
C3	2.60		3.00	0.102		0.118
D	8.80		9.30	0.346		0.366
E	9.80		10.4	0.386		0.410
F	6.40		6.80	0.252		0.268
G		5.08			0.200	
H	28.0		29.8	1.102		1.173
L1		3.63			0.143	
L2	1.14		1.70	0.045		0.067
L3		3.30			0.130	
V1		45°			45°	

## PACKAGE INFORMATION-TO-220FP-2L

OUTLINE	UNIT WEIGHT (g/PCS) typ.	TUBE (PCS)	PER CARTON (PCS)
TUBE	2	50	5,000

## CHARACTERISTICS CURVE

FIG.1: Typical forward characteristics(25°C)

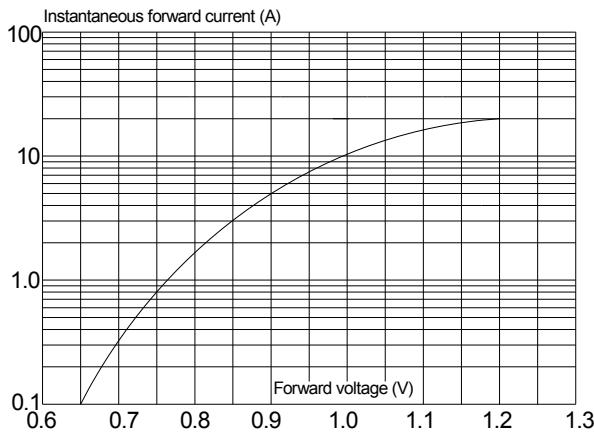


FIG.2: Typical reverse characteristics

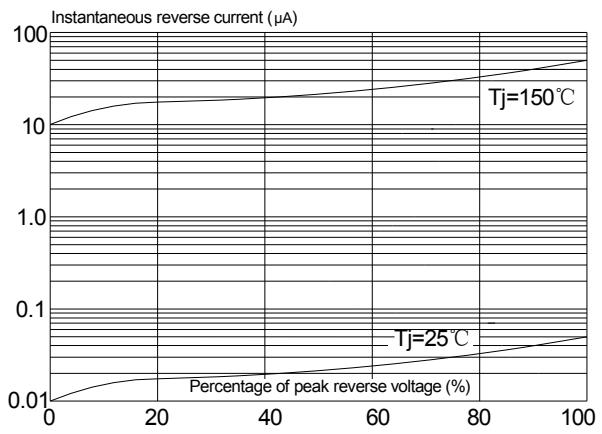


FIG.3: Maximum non-repetitive peak forward surge current

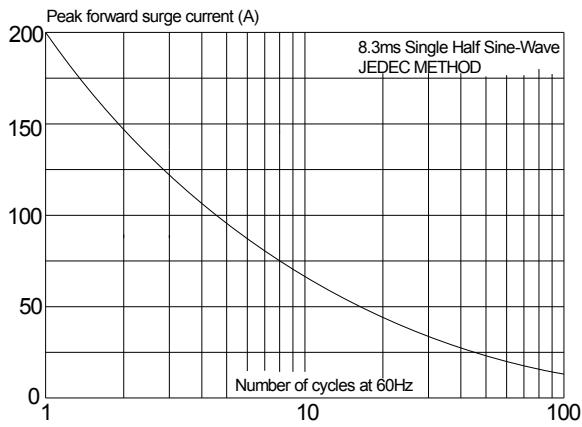
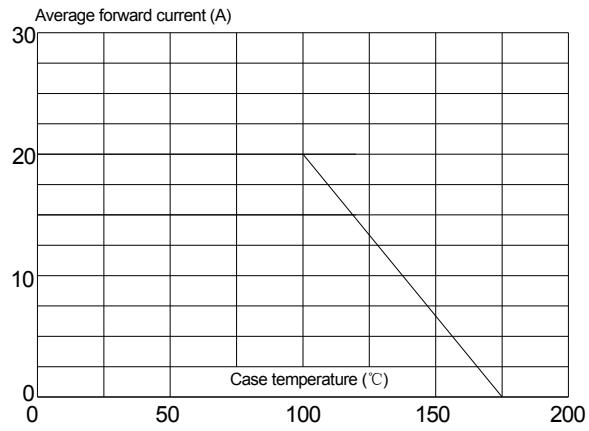


FIG.4:Forward current derating curve



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