



## JEER2004FPL EPI SUPERFAST SOFT RECOVERY RECTIFIER

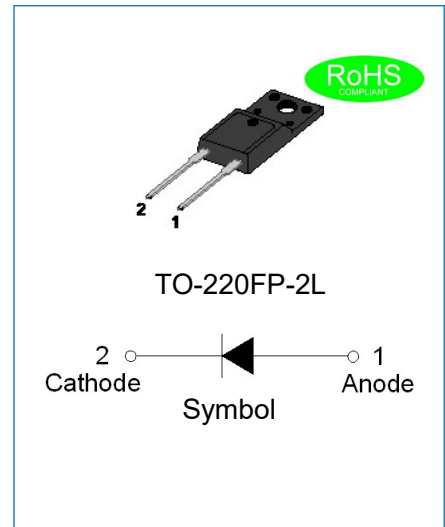
Rev.1.4

### 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 ambient temperature unless otherwise specified.)

Parameter	Symbol	JEER2004FPL	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	400	V
Maximum RMS voltage	$V_{RMS}$	280	V
Maximum DC blocking voltage	$V_{DC}$	400	V
Average forward current at $T_C=100^\circ C$	$I_{F(AV)}$	20	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	200	A
Junction temperature and storage temperature range	$T_j, T_{stg}$	-55 to +150	°C

### ISOLATION CHARACTERISTICS

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
$V_{isol(RMS)}$	RMS isolation voltage	50Hz≤f≤60Hz, RH≤65%, from all pins to external heatsink, sinusoidal waveform, clean and dust free	-	-	2500	V
$C_{isol}$	Isolation capacitance	From cathode to external heatsink	-	10	-	pF

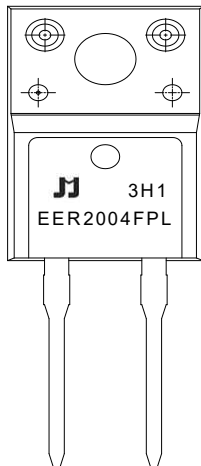
**ELECTRICAL CHARACTERISTICS**(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Forward voltage @I <sub>F</sub> =20A	V <sub>F</sub>	-	-	1.3	V
DC reverse current at rated DC blocking voltage	I <sub>R</sub>	T <sub>J</sub> =25°C	-	5	μA
		T <sub>J</sub> =150°C	-	300	
Reverse recovery time	t <sub>rr</sub>	-	-	35	ns

**THERMAL RESISTANCES**

Symbol	Parameter	Min.	Typ.	Max.	Unit
R <sub>th(j-c)</sub>	Thermal resistance from junction to case	-	3	-	°C/W

**MARKING**



EER	EPI Superfast Recovery Rectifier
20	I <sub>F(AV)</sub> =20A
04	V <sub>RRM</sub> :400V
FPL	Package:TO-220FP-2L

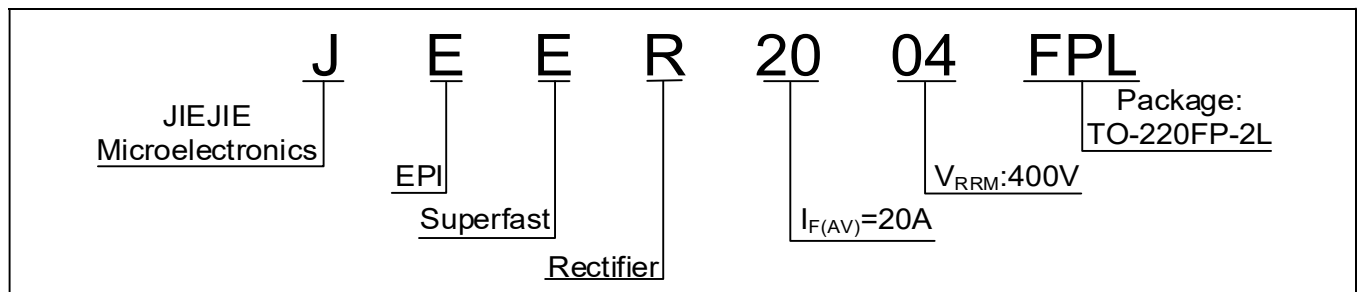
**xH1:** Month, 1/2/3~9/A/B/C

**3x1:**

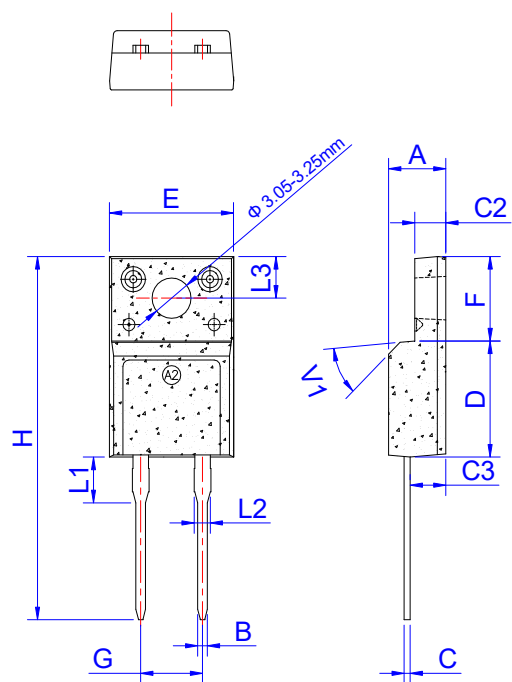
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

**3Hx:** Batch number

**ORDERING INFORMATION**



**PACKAGE MECHANICAL DATA**

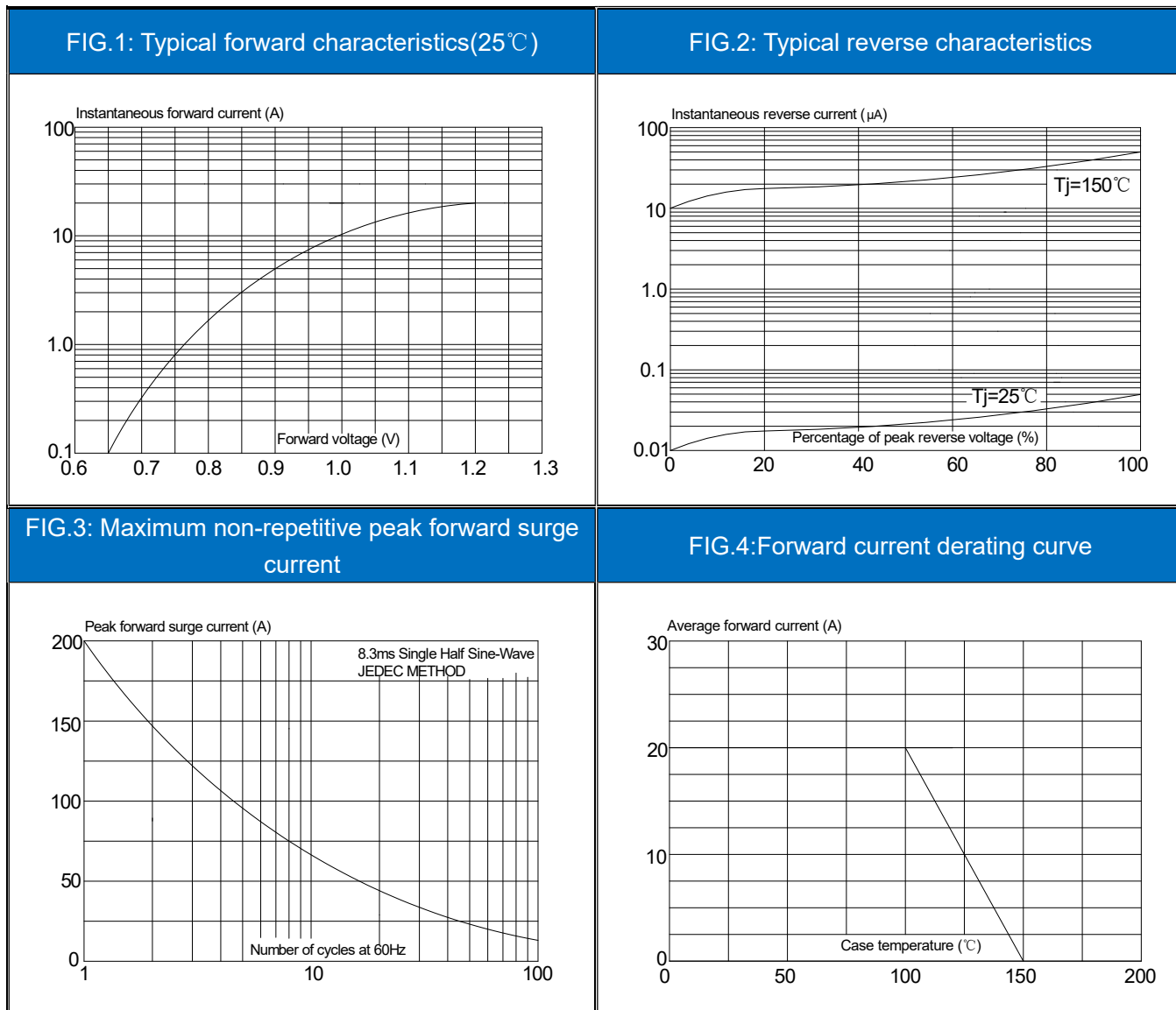


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.50		4.90	0.177		0.193
B	0.74	0.80	0.83	0.029	0.031	0.033
C	0.47		0.65	0.019		0.026
C2	2.45		2.75	0.096		0.108
C3	2.60		3.00	0.102		0.118
D	8.80		9.30	0.346		0.366
E	9.80		10.4	0.386		0.410
F	6.40		6.80	0.252		0.268
G		5.08			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




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