



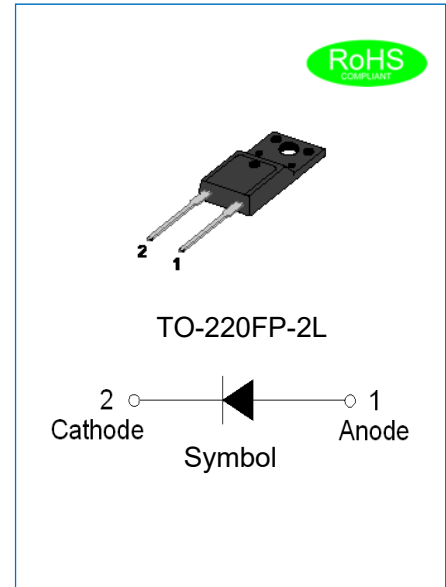
## JPUR3006FPL

### EPI PLANAR ULTRAFAST 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
- ✧ Ultrafast recovery time
- ✧ Epitaxial planar technology
- ✧ 5th Generation soft fast 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: 2 gram

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

Parameter	Symbol	JPUR3006FPL	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	600	V
Maximum RMS voltage	$V_{RMS}$	420	V
Maximum DC blocking voltage	$V_{DC}$	600	V
Average forward current at $T_C=88^\circ\text{C}$	$I_{F(AV)}$	30	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	330	A
Peak forward surge current: 10ms single half sine-wave superimposed on rated load		300	
Junction temperature and storage temperature range	$T_j, T_{stg}$	-55 to +175	°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

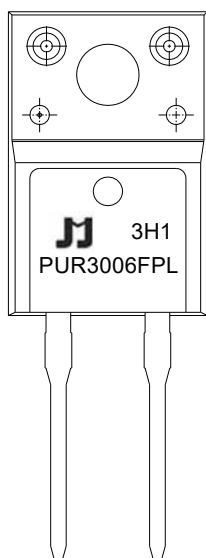
**ELECTRICAL CHARACTERISTICS**(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter		Symbol	Min.	Typ.	Max.	Unit
Forward voltage	$I_F=30A, T_j=25^\circ C$	$V_F$	-	1.35	1.6	V
	$I_F=30A, T_j=150^\circ C$		-	1.1	-	V
Reverse current	$V_R=600V, T_j=25^\circ C$	$I_R$	-	-	5	$\mu A$
	$V_R=600V, T_j=150^\circ C$		-	-	400	
Reverse recovery time	$I_F=1A, V_R=30V,$ $di_F/dt=200A/\mu s, T_j=25^\circ C$	$t_{rr}$	-	28	45	ns
	$I_F=30A, V_R=200V,$ $di_F/dt=200A/\mu s, T_j=25^\circ C$		-	80	-	
	$I_F=30A, V_R=200V,$ $di_F/dt=200A/\mu s, T_j=125^\circ C$		-	160	-	
Reverse recovery current	$I_F=30A, V_R=200V,$ $di_F/dt=200A/\mu s, T_j=25^\circ C$	$I_{RM}$	-	7.5	-	A
	$I_F=30A, V_R=200V,$ $di_F/dt=200A/\mu s, T_j=125^\circ C$		-	17.5	-	
Reverse charge	$I_F=30A, V_R=200V,$ $di_F/dt=200A/\mu s, T_j=25^\circ C$	$Q_r$	-	350	-	nC
	$I_F=30A, V_R=200V,$ $di_F/dt=200A/\mu s, T_j=125^\circ C$		-	1550	-	

**THERMAL RESISTANCES**

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-c)}$	Thermal resistance from junction to case	-	-	4	$^\circ C/W$

**MARKING**



PUR	Planar Ultrafast Recovery Rectifier
30	$I_{F(AV)}=30A$
06	$V_{RRM}:600V$
FPL	Package: TO-220FP-2L

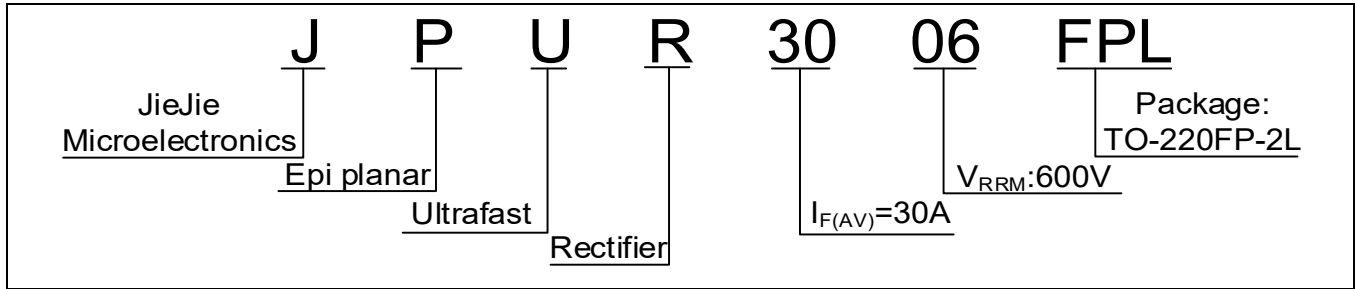
**xH1:** Month, 1/2/3~9/A/B/C

**3x1:**

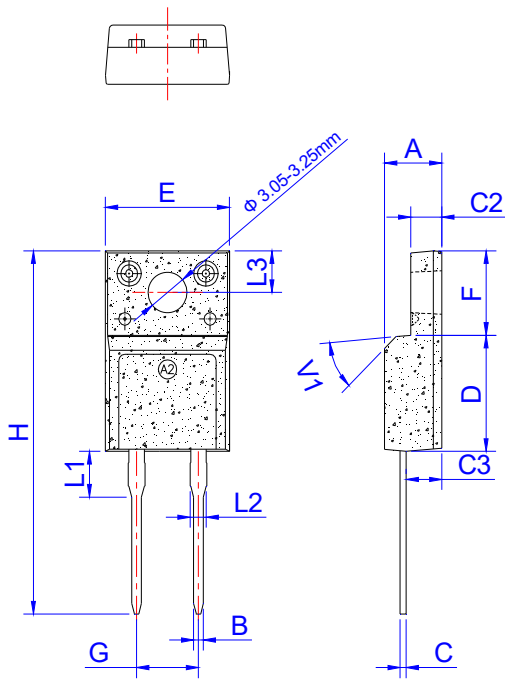
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

**3Hx:** Batch number

ORDERING INFORMATION



PACKAGE MECHANICAL DATA

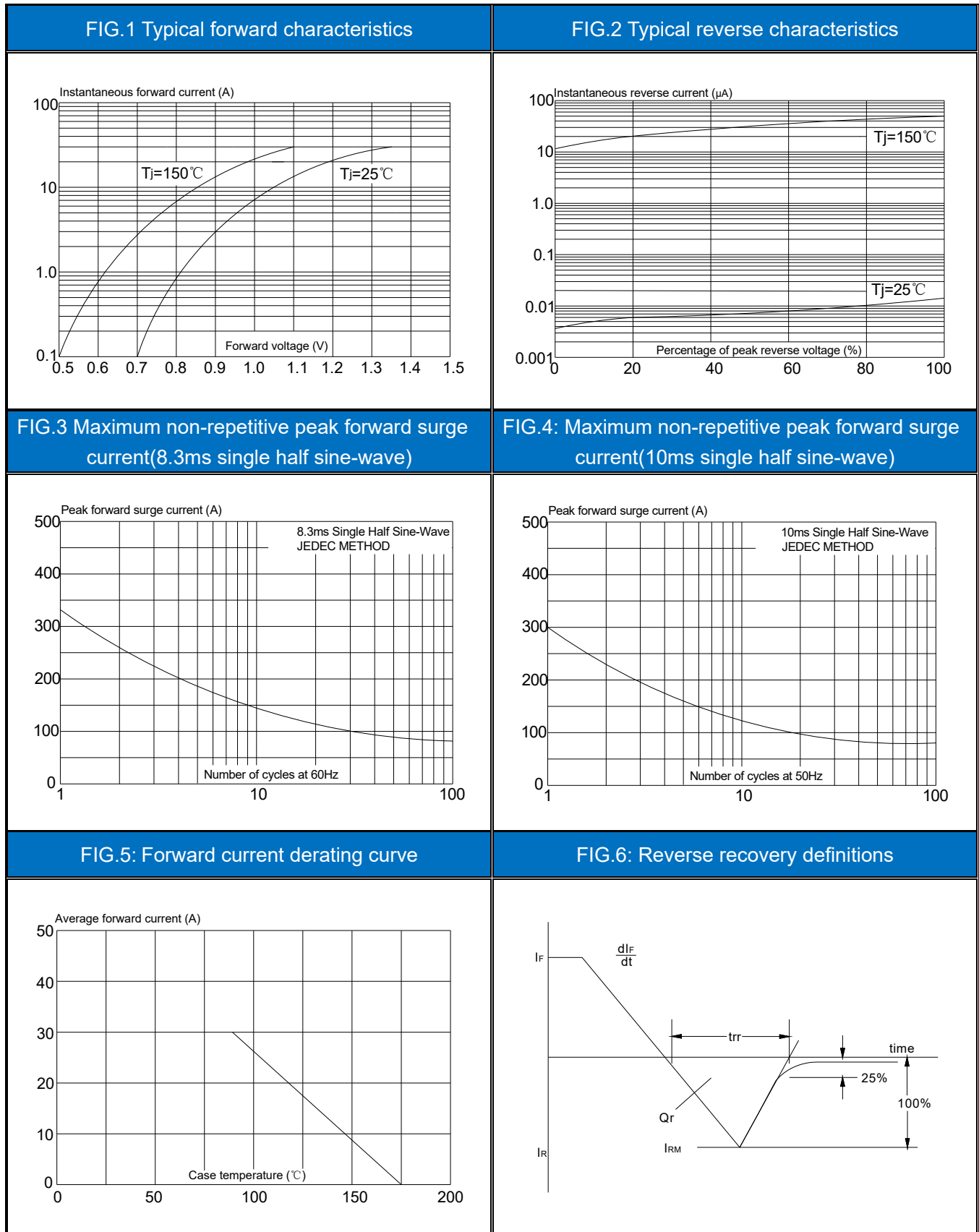


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.50		4.90	0.177		0.193
B	0.74	0.80	0.83	0.029	0.031	0.033
C	0.47		0.65	0.019		0.026
C2	2.45		2.75	0.096		0.108
C3	2.60		3.00	0.102		0.118
D	8.80		9.30	0.346		0.366
E	9.80		10.4	0.386		0.410
F	6.40		6.80	0.252		0.268
G		5.08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