



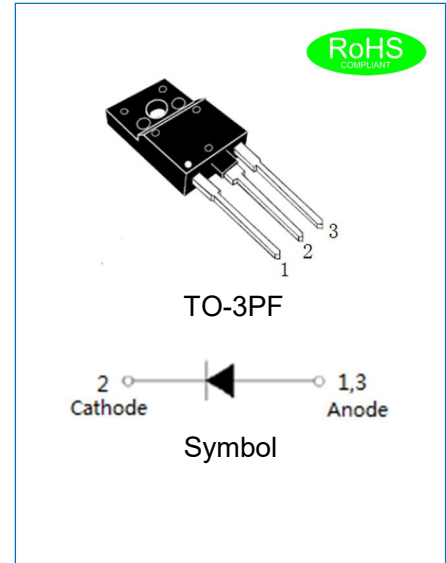
JEUR3006YW

EPI ULTRAFast 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 and soft recovery characteristics
- ✧ Low recovery loss
- ✧ Active PFC in air conditioner, S.M.P.S Power Factor Correction (PFC) and half bridge/full-bridge switched-mode power supplies



MECHANICAL DATA

- ✧ Case: TO-3PF molded plastic over passivated junction
- ✧ Terminals: Solder plated, solderable per J-STD-002

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

Parameter	Symbol	JEUR3006YW	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 $T_H \leq 73^\circ\text{C}$	$I_{F(AV)}$	30	A
Peak forward surge current: 10ms single half sine-wave superimposed on rated load	I_{FSM}	170	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load		190	
Junction temperature and storage temperature range	T_j, T_{stg}	-55 to +150	$^\circ\text{C}$

ISOLATION CHARACTERISTICS

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
$V_{isol(RMS)}$	RMS isolation voltage	50Hz \leq f \leq 60Hz, RH \leq 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	1.8	V
	$T_j=150^\circ C$		-	1.1	-	
DC reverse current at rated DC blocking voltage	$T_j=25^\circ C$	I_R	-	-	5	μA
	$T_j=150^\circ C$		-	-	300	
Reverse recovery time	$I_F=1A, V_R=30V,$ $di_F/dt=100A/\mu s, T_j=25^\circ C$	t_{rr}	-	37	65	ns
	$I_F=30A, V_R=200V,$ $di_F/dt=200A/\mu s, T_j=25^\circ C$		-	80	-	
	$I_F=30A, V_R=200V,$ $di_F/dt=200A/\mu s, T_j=125^\circ C$		-	130	-	
Peak reverse recovery current	$I_F=30A, V_R=200V,$ $di/dt=200A/\mu s, T_j=25^\circ C$	I_{RM}	-	10	-	A
	$I_F=30A, V_R=200V,$ $di/dt=200A/\mu s, T_j=125^\circ C$		-	18	-	
Recovered charge	$I_F=30A, V_R=200V,$ $di_F/dt=200A/\mu s, T_j=25^\circ C$	Q_r	-	380	-	nC
	$I_F=30A, V_R=200V,$ $di_F/dt=200A/\mu s, T_j=125^\circ C$		-	1150	-	

THERMAL RESISTANCES

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-h)}$	Thermal resistance from junction to heatsink	-	2.3	2.6	$^\circ C/W$
$R_{th(j-a)}$	Thermal resistance from junction to ambient	-	35	-	$^\circ C/W$

MARKING



EUR	EPI Ultrafast Recovery Rectifier
30	$I_{F(AV)}=30A$
06	$V_{RRM}:600V$
YW	Package:TO-3PF

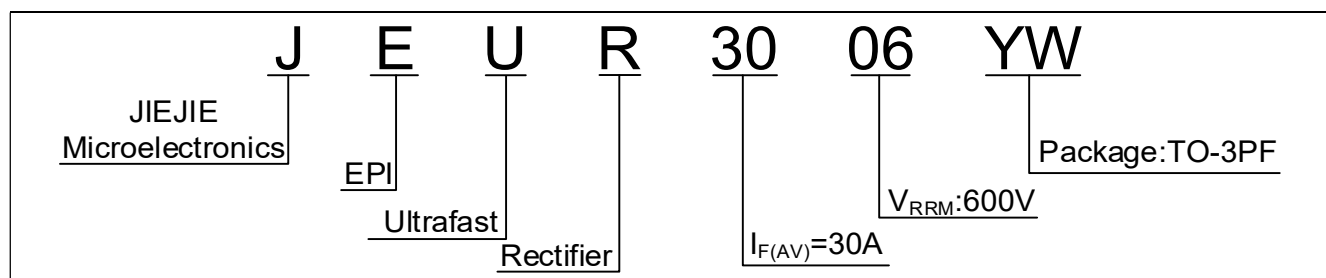
xH1: Month, 1/2/3~9/A/B/C

3x1:

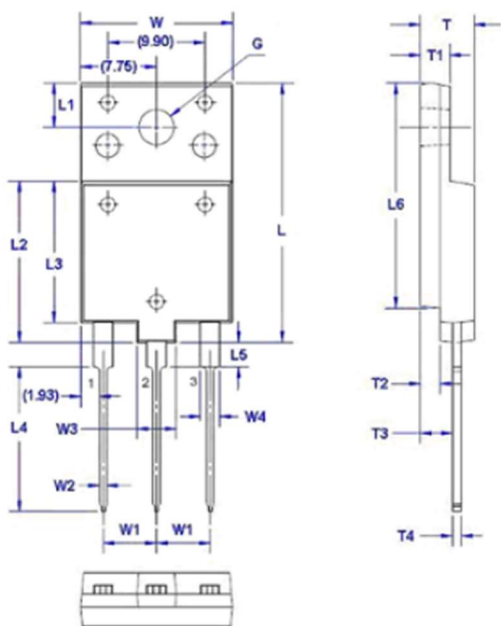
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

3Hx: Batch number

ORDERING INFORMATION



PACKAGE MECHANICAL DATA



(Unit: mm)

Symbol	Dimension		Symbol	Dimension	
	Min	Max		Min	Max
W	15.30	15.70	L4	14.60	15.00
W1	5.15	5.75	L5	2.30	2.70
W2	0.65	0.95	L6	22.80	23.20
W3	3.80	4.20	T	5.30	5.70
W4	1.80	2.20	T1	2.80	3.20
L	26.30	26.70	T2	1.80	2.20
L1	4.40	4.60	T3	3.10	3.50
L2	16.30	16.70	T4	0.80	1.10
L3	14.30	14.70	G(Φ)	3.40	3.80

CHARACTERISTICS CURVE

FIG.1: Typical forward characteristics

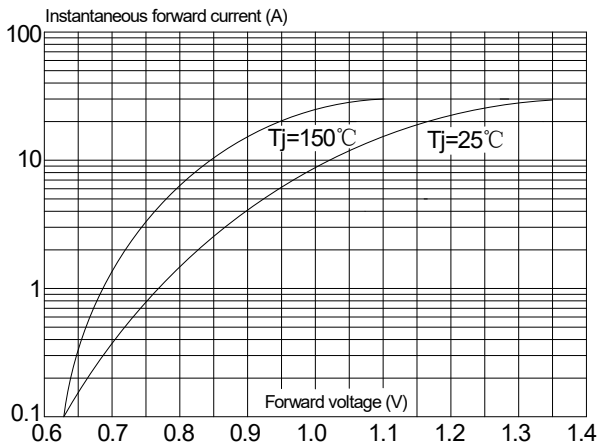


FIG.2: Typical reverse characteristics

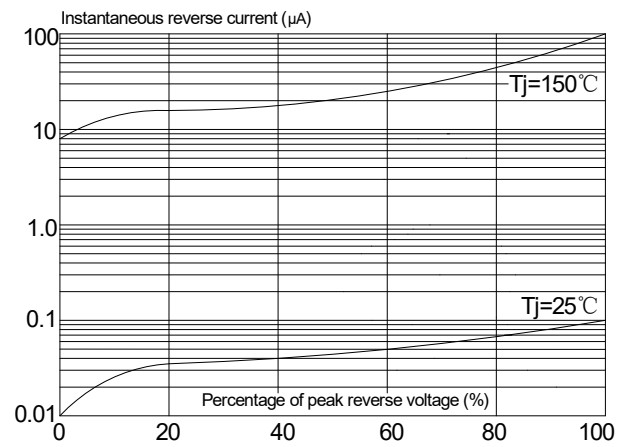


FIG.3: Maximum non-repetitive peak forward surge current(10ms single half sine-wave)

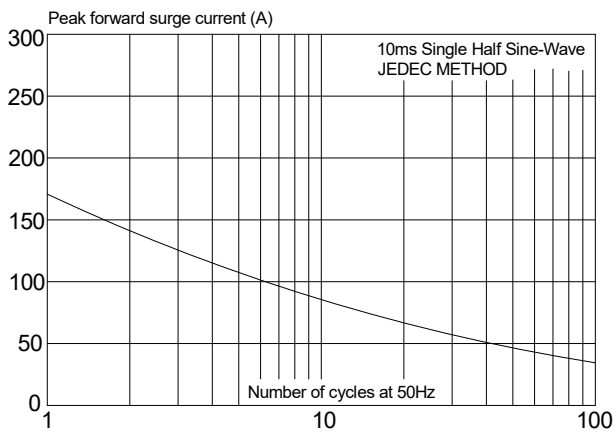


FIG.4: Maximum non-repetitive peak forward surge current(8.3ms single half sine-wave)

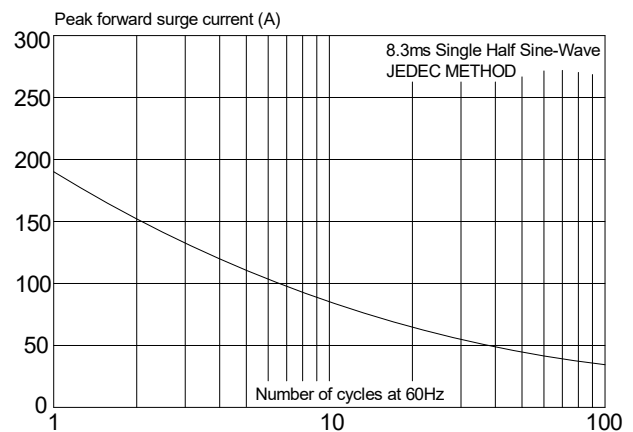


FIG.5: Forward current derating curve

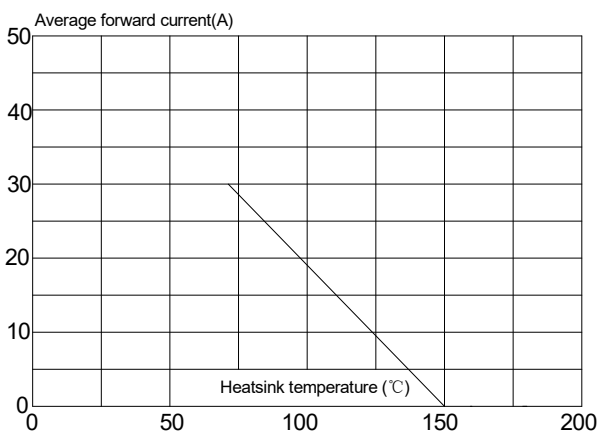
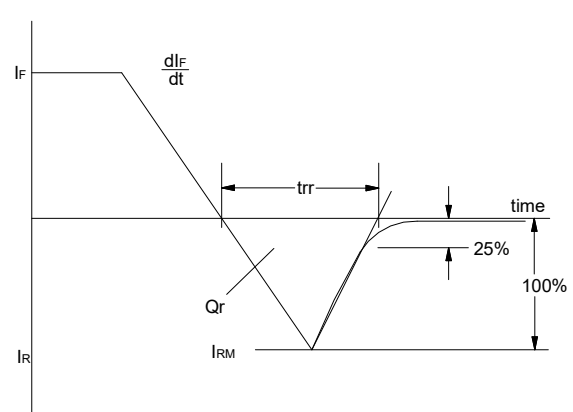


FIG.6: Reverse recovery definitions




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