



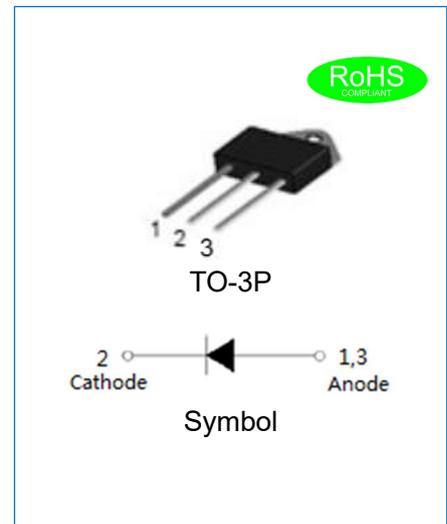
JEUR3006ZW

EPI ULTRAFAST RECOVERY RECTIFIER

Rev.1.6

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-3P molded plastic over passivated junction
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Internally constructed isolated package is offered for ease of heat sinking with highest isolation voltage

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

Parameter	Symbol	JEUR3006ZW	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 $T_c=70^\circ\text{C}$	$I_{F(AV)}$	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	°C

ISOLATION CHARACTERISTICS

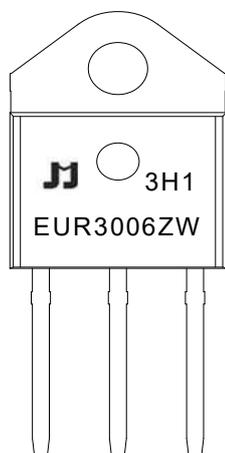
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
$V_{isol(RMS)}$	RMS isolation voltage	50Hz $\leq f \leq$ 60Hz, RH \leq 65%, from all pins to external heatsink, sinusoidal waveform, clean and dust free	-	-	2500	V
C_{isol}	Isolation capacitance	from cathode to external heatsink	-	10	-	pF

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
	$T_j=150^\circ C$		-	0.96	-	
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
$R_{th(j-c)}$	Thermal resistance from junction to case	-	1.5	-	$^\circ C/W$

MARKING


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

 $\underline{x}H1$: Month, 1/2/3~9/A/B/C

 $3\underline{x}1$:

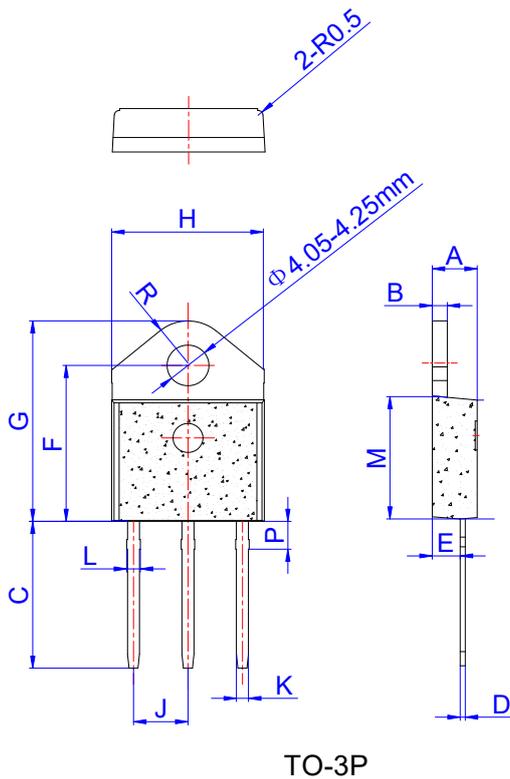
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

 $3H\underline{x}$: Batch number

ORDERING INFORMATION

<p>J</p> <p>JIEJIE Microelectronics</p>	<p>E</p> <p>EPI</p> <p>Ultrafast</p>	<p>U</p> <p>Rectifier</p>	<p>R</p>	<p>30</p> <p>$I_{F(AV)}=30A$</p>	<p>06</p> <p>$V_{RRM}:600V$</p>	<p>ZW</p> <p>Package:TO-3P</p>
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PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	1.45		1.55	0.057		0.061
C	14.35		15.60	0.565		0.614
D	0.50		0.70	0.020		0.028
E	2.70		2.90	0.106		0.114
F	15.80		16.50	0.622		0.650
G	20.40		21.10	0.803		0.831
H	15.10		15.50	0.594		0.610
J	5.40		5.65	0.213		0.222
K	1.10		1.40	0.043		0.055
L	1.35		1.50	0.053		0.059
M	12.37		12.77	0.487		0.503
P	2.80		3.00	0.110		0.118
R		4.35			0.171	

PACKAGE INFORMATION-TO-3P

OUTLINE	UNIT WEIGHT (g/PCS) TYP	TUBE (PCS)	PER CARTON (PCS)
TUBE	4.805	30	2,250

CHARACTERISTICS CURVE

FIG.1: Typical forward characteristics

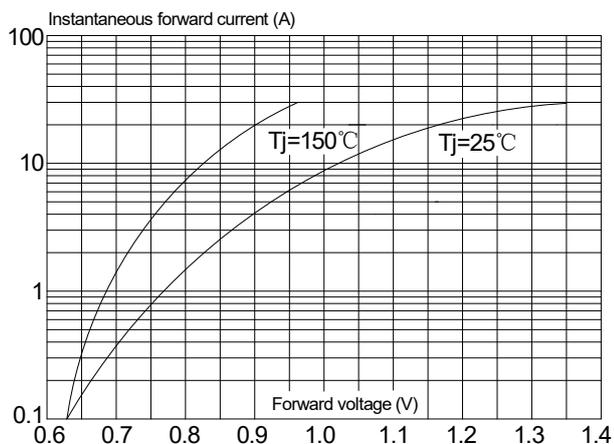


FIG.2: Typical reverse characteristics

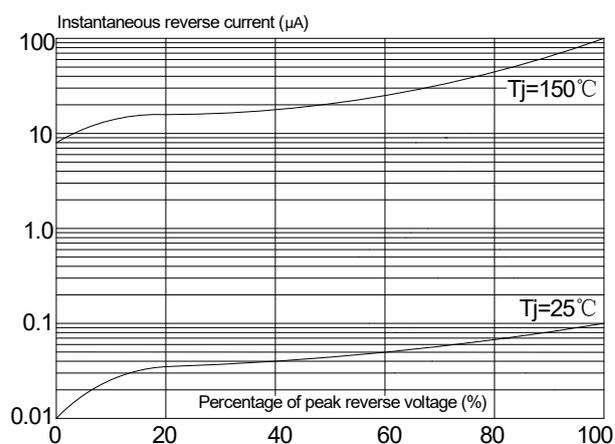


FIG.3: Maximum non-repetitive peak forward surge current(10ms single half sine-wave)

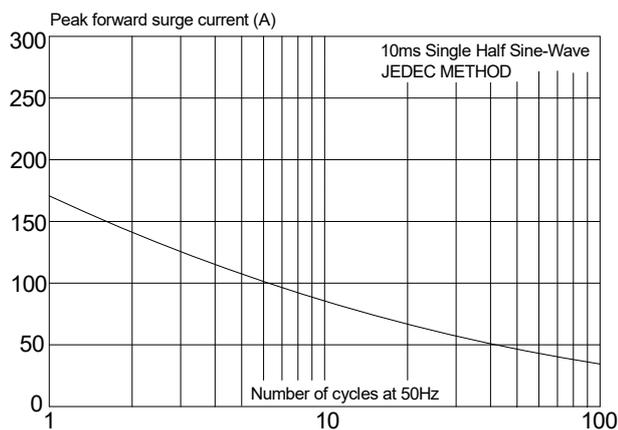


FIG.4: Maximum non-repetitive peak forward surge current(8.3ms single half sine-wave)

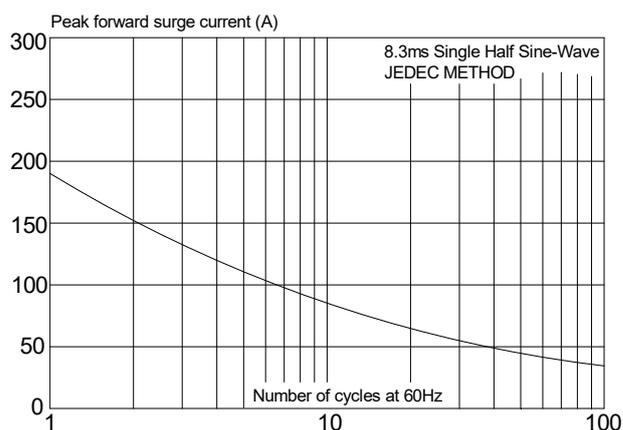


FIG.5: Forward current derating curve

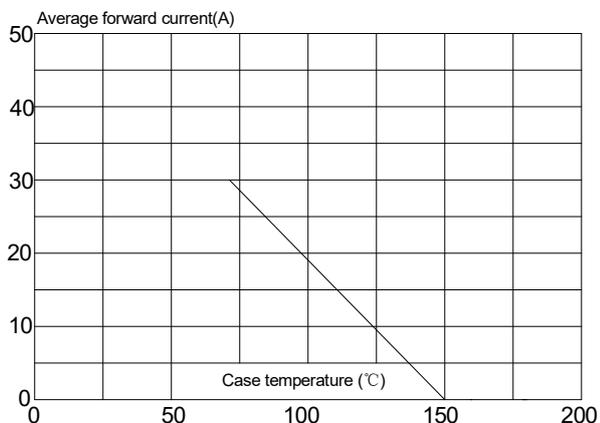
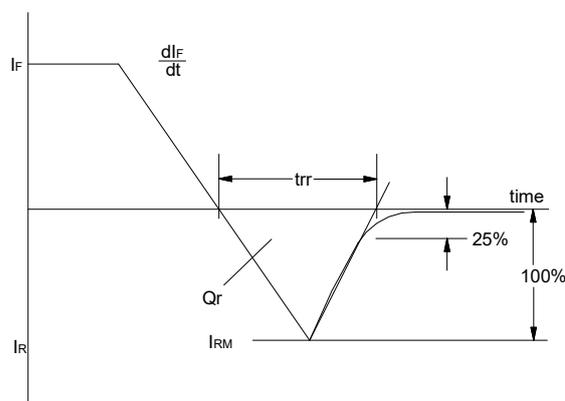


FIG.6: Reverse recovery definitions



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