

**JEER3006ZCT****EPI SUPERFAST SOFT RECOVERY RECTIFIER**

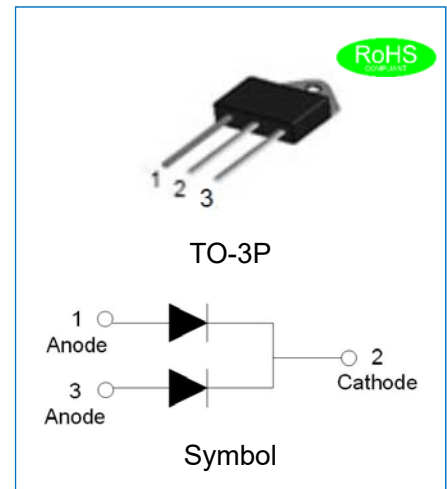
Rev.1.5

**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-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
- ✧ Weight: 4.805gram

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

Parameter	Symbol	JEER3006ZCT	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	600	V
Maximum DC blocking voltage	$V_{DC}$	600	V
Maximum average forward rectified current at $T_{mb}=128^{\circ}\text{C}$	$I_{F(AV)}$	30	A
Peak forward surge current: 10ms single half sine-wave superimposed on rated load (per diode)	$I_{FSM}$	140	A
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

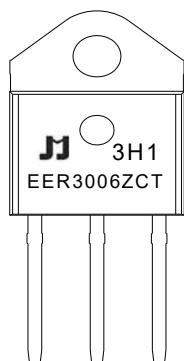
**ELECTRICAL CHARACTERISTICS**(Rating at 25°C case temperature unless otherwise specified.)

Parameter		Symbol	Min.	Typ.	Max.	Unit
Forward voltage	$I_F=15A, T_J=25^{\circ}C$	$V_F$	-	1.4	1.7	V
	$I_F=15A, T_J=150^{\circ}C$		-	1.1	1.4	
Reverse current	$V_R=600V, T_J=25^{\circ}C$	$I_R$	-	-	5	$\mu A$
	$V_R=600V, T_J=150^{\circ}C$		-	-	300	
Reverse recovery time	$I_F=1A, V_R=30V, dl_F/dt=100A/\mu s, T_J=25^{\circ}C$	$t_{rr}$	-	25	50	ns
	$I_F=15A, V_R=400V, dl_F/dt=200A/\mu s, T_J=25^{\circ}C$		-	45	-	
	$I_F=15A, V_R=400V, dl_F/dt=200A/\mu s, T_J=125^{\circ}C$		-	65	-	
	$I_F=15A, V_R=400V, dl_F/dt=500A/\mu s, T_J=25^{\circ}C$		-	34	-	
Peak reverse recovery current	$I_F=15A, V_R=400V, dl_F/dt=200A/\mu s, T_J=25^{\circ}C$	$I_{RM}$	-	5.5	-	A
	$I_F=15A, V_R=400V, dl_F/dt=200A/\mu s, T_J=125^{\circ}C$		-	9.7	-	
Recovered charge	$I_F=15A, V_R=400V, dl_F/dt=200A/\mu s, T_J=25^{\circ}C$	$Q_r$	-	125	-	nC
	$I_F=15A, V_R=400V, dl_F/dt=200A/\mu s, T_J=125^{\circ}C$		-	318	-	

**THERMAL RESISTANCES**

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-mb)}$	Thermal resistance from junction to mounting base, per diode	-	1.2	2	$^{\circ}C/W$
	Thermal resistance from junction to mounting base, both diodes conducting	-	0.65	1.2	
$R_{th(j-a)}$	Thermal resistance from junction to ambient	-	45	-	$^{\circ}C/W$

## MARKING



EER	EPI Superfast Recovery Rectifier
30	$I_{F(AV)}=30A$
06	$V_{RRM}: 600V$
Z	Package: TO-3P
CT	Common cathode

xH1: Month, 1、2、3 ~ 9、A、B、C

3x1:

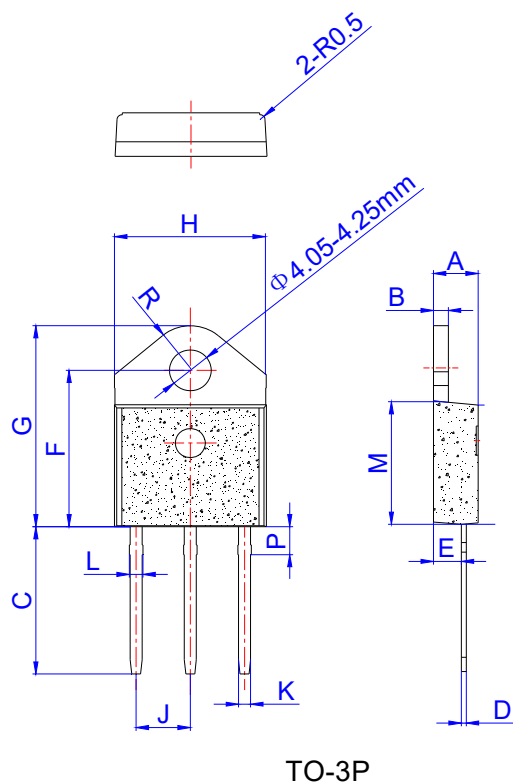
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

3Hx: Batch number

## ORDERING INFORMATION

<u>J</u>	<u>E</u>	<u>E</u>	<u>R</u>	<u>30</u>	<u>06</u>	<u>Z</u>	<u>CT</u>
JieJie Microelectronics	Epi	Superfast	Rectifier	$I_{F(AV)}=30A$	$V_{RRM}:600V$	Package:TO-3P	Common cathode

## 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

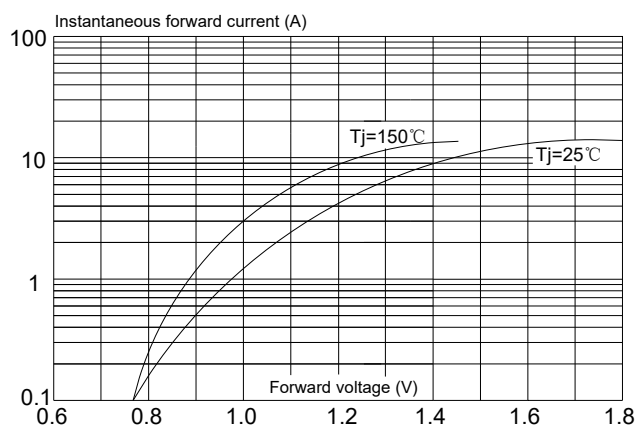


FIG.2: Typical reverse characteristics

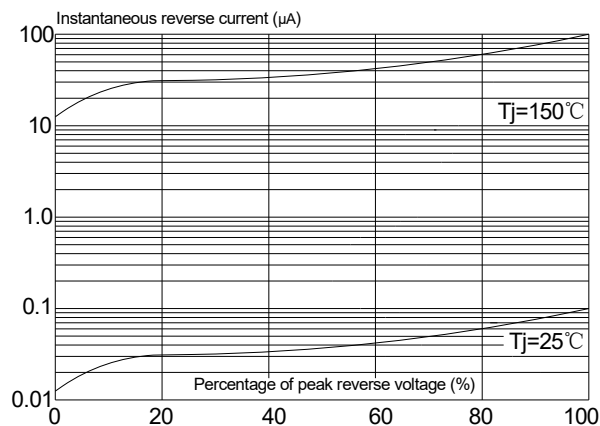


FIG.3: Maximum non-repetitive peak forward surge current(10ms single half sine-wave)

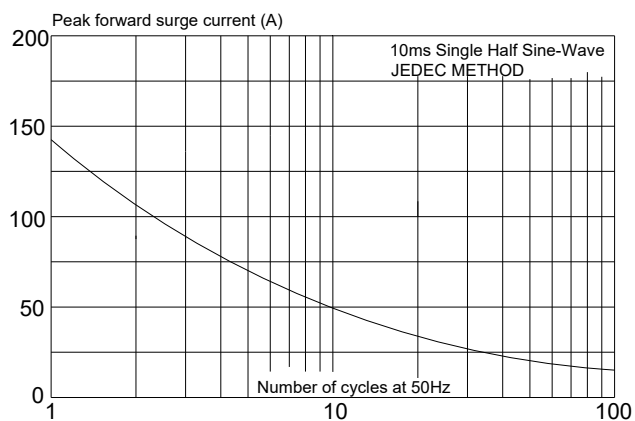


FIG.4: Forward current derating curve

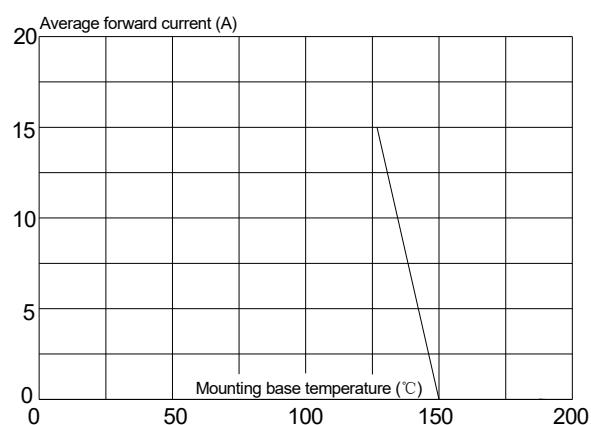
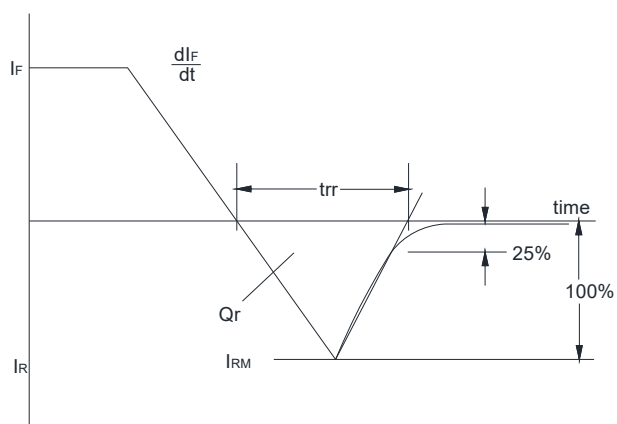


FIG.5: Reverse recovery definitions



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