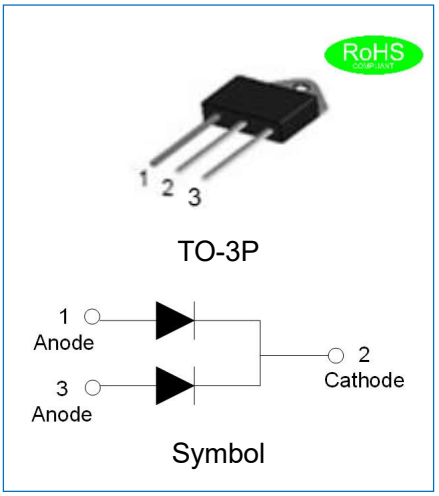
JEER3006ZCT

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-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℃ case temperature unless otherwise specified.)

Parameter	Symbol	JEER3006ZCT	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
Maximum average forward rectified current at T_{mb}=128℃	$I_{F(AV)}$	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	℃

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

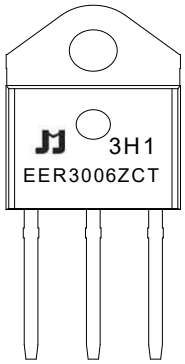
ELECTRICAL CHARACTERISTICS(Rating at 25℃ case temperature unless otherwise specified.)

Parameter		Symbol	Min.	Typ.	Max.	Unit
Forward voltage	I_F=15A,T_j=25℃	V_F	-	1.4	1.7	V
	I_F=15A,T_j=150℃		-	1.1	1.4	
DC reverse current at rated DC blocking voltage	T_j=25℃	I_R	-	-	5	μA
	T_j=150℃		-	-	300	
Reverse recovery time	I_F=1A, V_R=30V, dI_F/dt=100A/μs, T_j=25℃	t_{rr}	-	25	50	ns
	I_F=15A, V_R=400V, dI_F/dt=200A/μs, T_j=25℃		-	45	-	
	I_F=15A, V_R=400V, dI_F/dt=200A/μs, T_j=125℃		-	65	-	
	I_F=15A, V_R=400V, dI_F/dt=500A/μs, T_j=25℃		-	34	-	
Peak reverse recovery current	I_F=15A, V_R=400V, dI_F/dt=200A/μs, T_j=25℃	I_{RM}	-	5.5	-	A
	I_F=15A, V_R=400V, dI_F/dt=200A/μs, T_j=125℃		-	9.7	-	
Recovered charge	I_F=15A, V_R=400V, dI_F/dt=200A/μs, T_j=25℃	Q_r	-	125	-	nC
	I_F=15A, V_R=400V, dI_F/dt=200A/μs, T_j=125℃		-	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	℃/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	-	℃/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

3**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	…

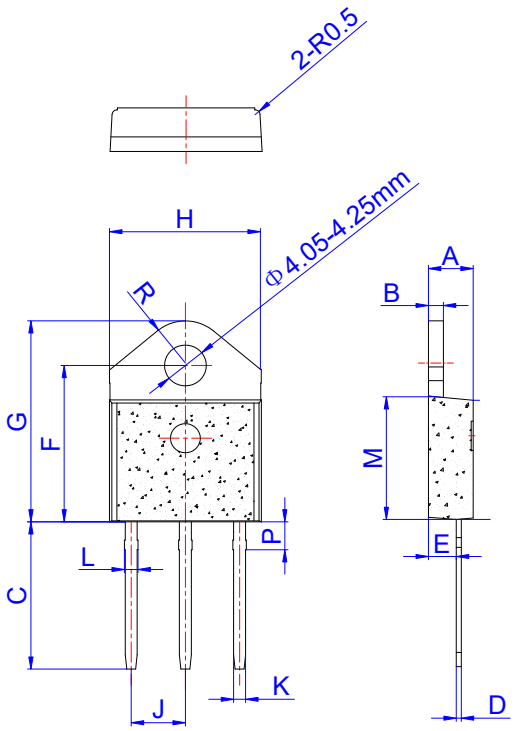
3H**x**：Batch number

ORDERING INFORMATION

J E E R 30 06 Z CT

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

PACKAGE MECHANICAL DATA



TO-3P

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

CHARACTERITICS CURVE

FIG.1: Typical forward characteristics

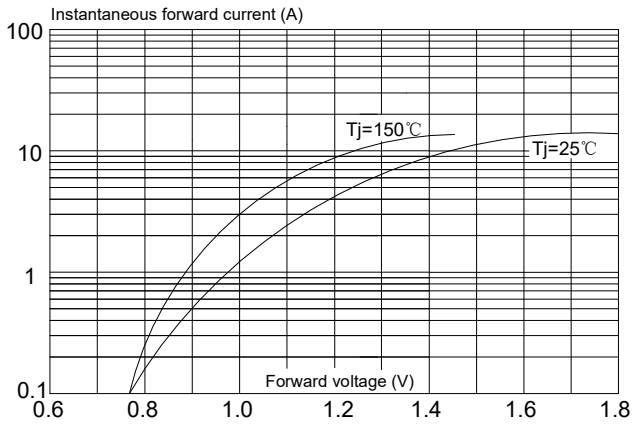


FIG.2: Typical reverse characteristics

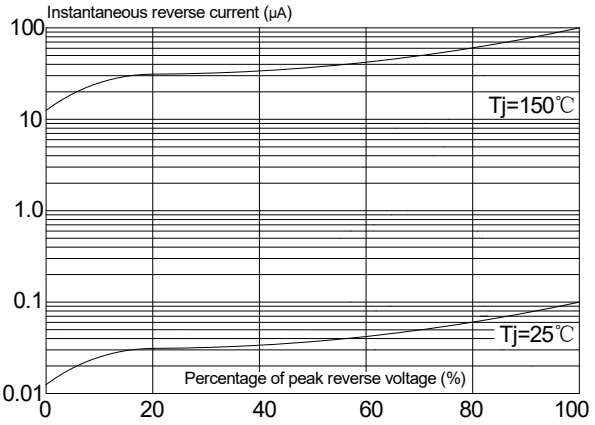


FIG.3: Maximum non-repetitive peak forward surge current(10ms single half sine-wave)

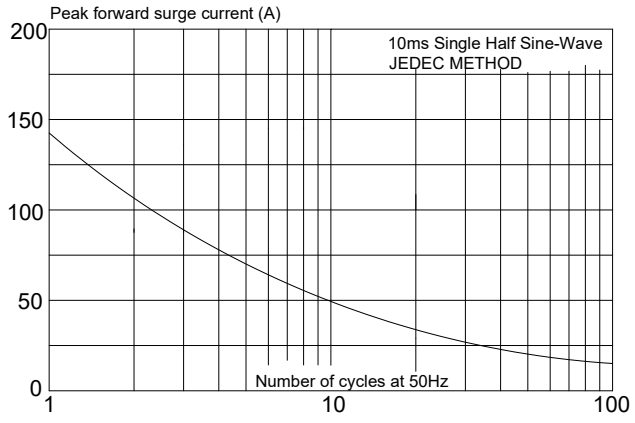


FIG.4: Forward current derating curve

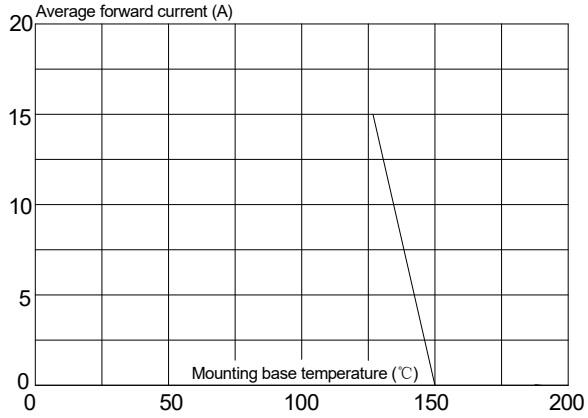
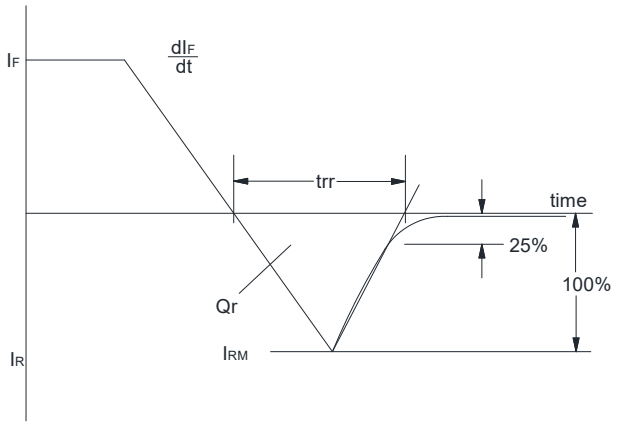


FIG.5: Reverse recovery definitions



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