



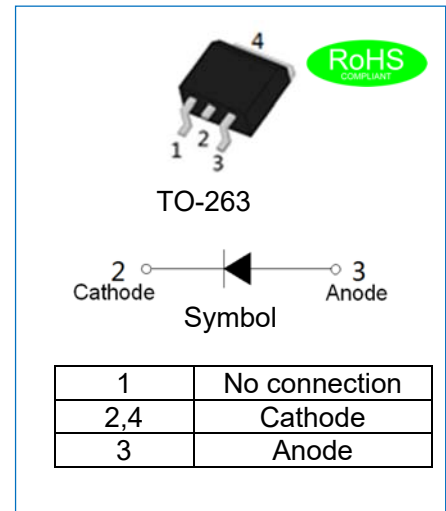
## JEER3006E

### EPI SUPERFAST 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 forward voltage drop
- ✧ Superfast recovery time and soft recovery characteristics
- ✧ Low recovery loss



#### MECHANICAL DATA

- ✧ Case: TO-263 molded plastic over passivated junction
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Weight: 1.55 gram

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

Parameter	Symbol	JEER3006E	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 $T_C=113^\circ\text{C}$	$I_{F(AV)}$	30	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	200	A
Peak forward surge current: 10ms single half sine-wave superimposed on rated load		180	
Junction temperature and storage temperature range	$T_j, T_{stg}$	-55 to +150	°C

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

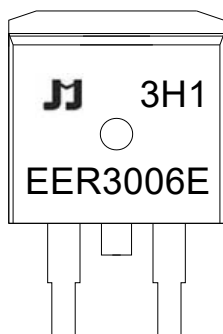
Parameter	Symbol	Min.	Typ.	Max.	Unit	
Forward voltage	$V_F$	-	$I_F=30\text{A}, T_j=25^\circ\text{C}$	1.65	2.0	V
			$I_F=30\text{A}, T_j=150^\circ\text{C}$	1.35	-	
Reverse current at rated DC blocking voltage	$I_R$	-	$T_j=25^\circ\text{C}$	-	5	$\mu\text{A}$
			$T_j=150^\circ\text{C}$	-	400	
Reverse recovery time	$t_{rr}$	-	$I_F=1\text{A}, dI_F/dt=50\text{A}/\mu\text{s}, V_R=30\text{V}$	35	50	ns
			$I_F=30\text{A}, dI_F/dt=200\text{A}/\mu\text{s}, V_R=200\text{V}, T_j=25^\circ\text{C}$	50		

	$I_F=30A, di_F/dt=200A/\mu s, V_R=200V, T_j=125^\circ C$			90		
Peak reverse recovery current	$I_F=30A, V_R=200V, di/dt=200A/\mu s, T_j=25^\circ C$	$I_{RM}$	-	5.5	-	A
	$I_F=30A, V_R=200V, di/dt=200A/\mu s, T_j=125^\circ C$			12		
Recovered charge	$I_F=30A, V_R=200V, di/dt=200A/\mu s, T_j=25^\circ C$	$Q_r$	-	160	-	nC
	$I_F=30A, V_R=200V, di/dt=200A/\mu s, T_j=125^\circ C$			600		

**THERMAL RESISTANCES**

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-c)}$	Thermal resistance from junction to case	-	2	-	$^\circ C/W$

**MARKING**



EER	EPI Superfast Recovery Rectifier
30	$I_{F(AV)}=30A$
06	$V_{RRM}:600V$
E	Package:TO-263

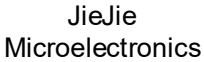
$xH1$ : Month, 1/2/3~9/A/B/C

$3x1$ :

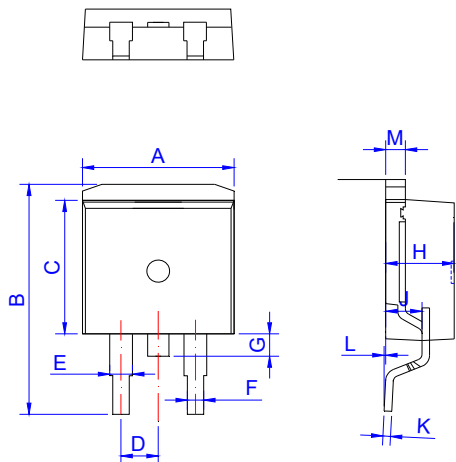
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

$3Hx$ : Batch number

**ORDERING INFORMATION**

	<b>J</b>	<b>E</b>	<b>E</b>	<b>R</b>	<b>30</b>	<b>06</b>	<b>E</b>	<b>-R</b>
	EPI	Superfast	Rectifier	$I_{F(AV)}=30A$	$V_{RRM}:600V$	Package:TO-263	Null:Tube R:Tape and reel	

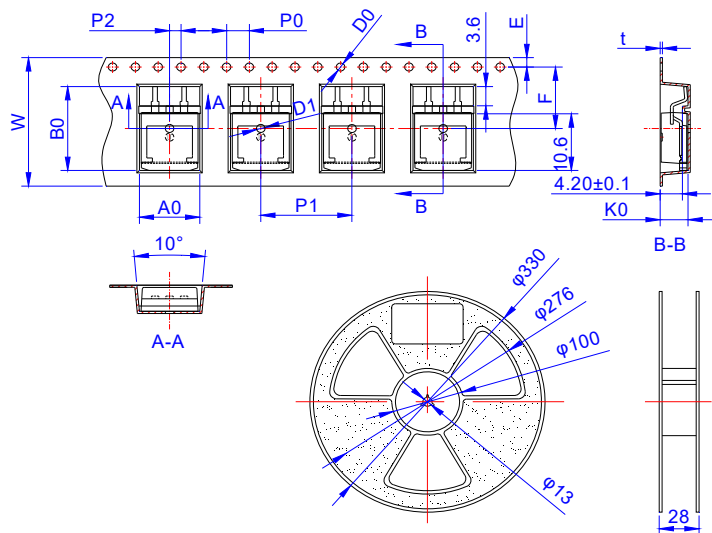
PACKAGE MECHANICAL DATA



TO-263

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	9.90		10.20	0.390		0.402
B	14.70		15.80	0.579		0.622
C	8.80		9.60	0.346		0.378
D		2.54			0.100	
E	1.20		1.40	0.047		0.055
F	0.75		0.85	0.030		0.033
G			1.75			0.069
H	4.40		4.70	0.173		0.185
J	2.30		2.70	0.091		0.106
K	0.38		0.55	0.015		0.022
L	0	0.10	0.25	0	0.004	0.010
M	1.17		1.37	0.046		0.054

TAPE AND REEL SPECIFICATION-TO-263



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
W	23.70	24.00	24.30	0.933	0.945	0.957
E	1.65	1.75	1.85	0.065	0.069	0.073
F	11.40	11.50	11.60	0.449	0.453	0.457
D0	-	1.50	1.60	-	0.059	0.063
D1	-	1.50	1.60	-	0.059	0.063
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	15.90	16.00	16.10	0.626	0.630	0.634
P2	1.90	2.00	2.10	0.075	0.079	0.083
A0	10.80	10.90	11.00	0.425	0.429	0.433
B0	16.20	16.30	16.40	0.638	0.642	0.646
K0	4.80	4.90	5.00	0.189	0.193	0.197
t	0.35	0.40	0.45	0.014	0.016	0.018

PACKAGE INFORMATION-TO-263

PART No.	UNIT WEIGHT (g/PCS) TYP	TUBE (PCS)	PER CARTON (PCS)
JEER3006E	1.55	50	5,000
PART No.	UNIT WEIGHT (g/PCS) TYP	REEL (PCS)	PER CARTON (PCS)
JEER3006E-R	1.55	800	4,000

CHARACTERISTICS CURVE

FIG.1: Typical forward characteristics

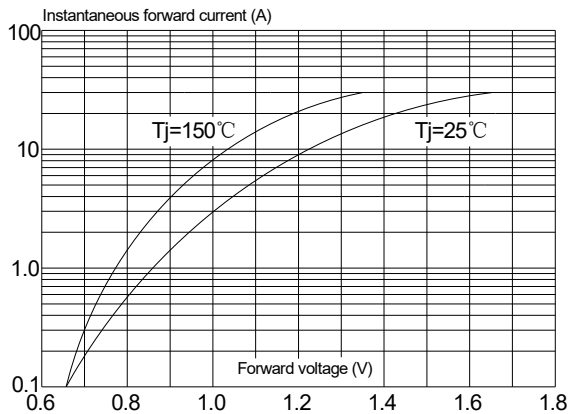


FIG.2: Typical reverse characteristics

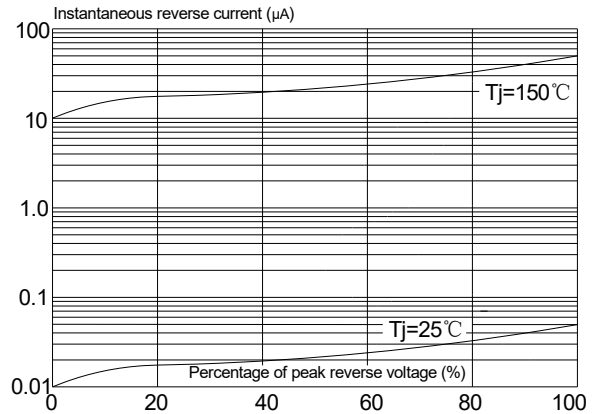


FIG.3: Maximum non-repetitive peak forward surge Current(8.3ms single half sine-wave)

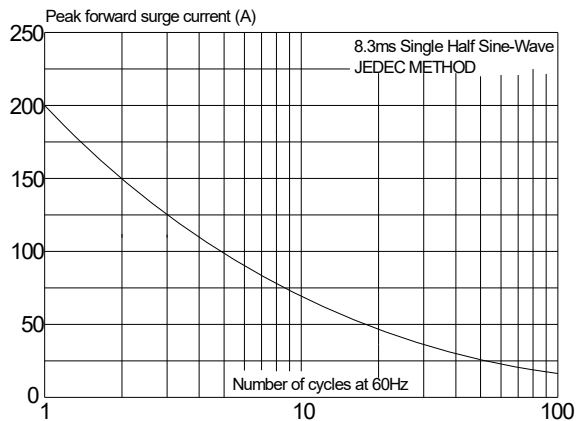


FIG.4: Maximum non-repetitive peak forward surge current(10ms single half sine-wave)

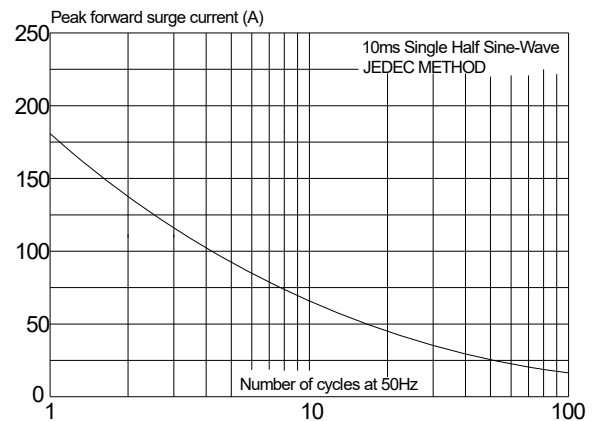


FIG.5: Forward current derating curve

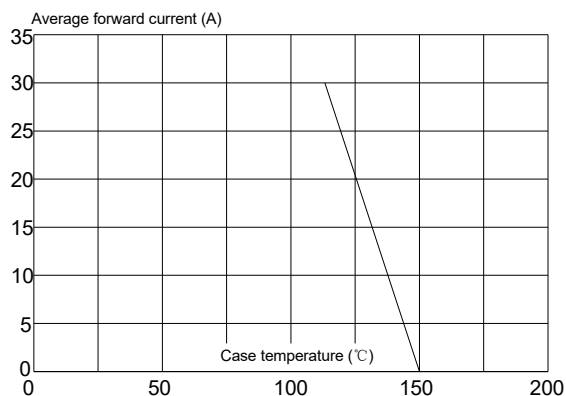
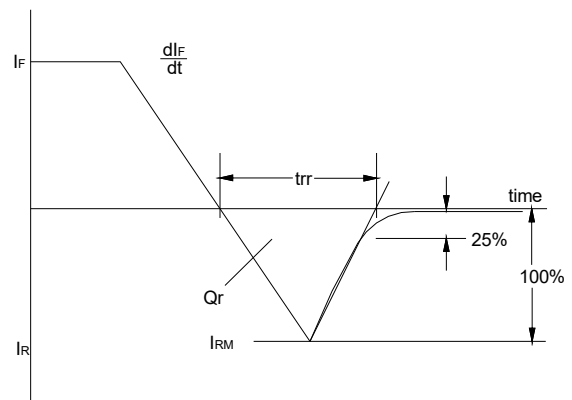


FIG.6: Reverse recovery definitions




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