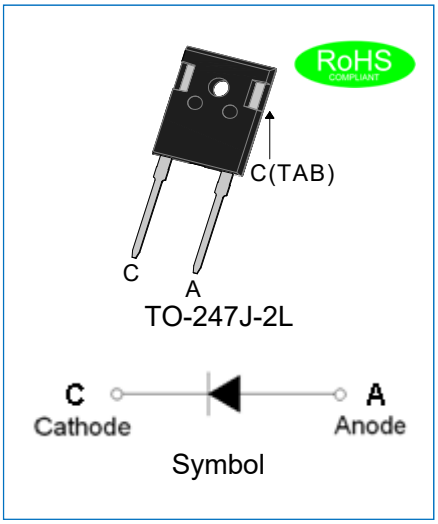
JEUR4006SL

EPI ULTRAFAST RECOVERY RECTIFIER

Rev.1.7

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



MECHANICAL DATA

- ✧ Case: TO-247J-2L molded plastic
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Weight:5.75gram

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

Parameter	Symbol	JEUR4006SL	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_{mb}=122℃	$I_{F(AV)}$	40	A
Peak forward surge current: 10ms single half sine-wave superimposed on rated load	I_{FSM}	300	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	330	A
Junction temperature and storage temperature range	T_j,T_{stg}	-55 to +150	℃

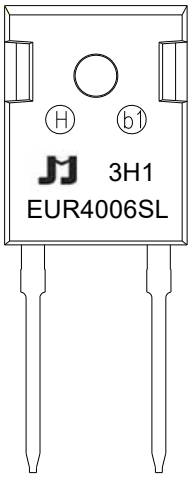
ELECTRICAL CHARACTERISTICS(Rating at 25℃ ambient temperature unless otherwise specified.)

Parameter		Symbol	Min.	Typ.	Max.	Unit
Forward voltage	I_F=40A,T_j=25℃	V_F	-	1.35	1.6	V
	I_F=40A,T_j=150℃		-	1.15	1.45	
Reverse current	V_R=600V,T_j=25℃	I_R	-	-	5	μA
	V_R=600V,T_j=150℃		-	-	400	
Reverse recovery time	I_F=1A,V_R=30V, di/dt=50A/μs,T_j=25℃	t_{rr}	-	53	-	ns
	I_F=40A,V_R=400V, di/dt=200A/μs,T_j=25℃		-	92	-	
	I_F=40A,V_R=400V, di/dt=200A/μs,T_j=125℃		-	160	-	
	I_F=40A,V_R=400V, di/dt=500A/μs,T_j=25℃		-	75	-	
Peak reverse recovery current	I_F=40A,V_R=400V, di/dt=200A/μs,T_j=25℃	I_{RM}	-	12	-	A
	I_F=40A,V_R=400V, di/dt=200A/μs,T_j=125℃		-	23	-	
Recovered charge	I_F=40A,V_R=400V, di/dt=200A/μs,T_j=25℃	Q_r	-	600	-	nC
	I_F=40A,V_R=400V, di/dt=200A/μs,T_j=125℃		-	1900	-	

THERMAL RESISTANCES

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-a)}$	Thermal resistance from junction to ambient	-	40	-	℃/W
$R_{th(j-mb)}$	Thermal resistance from junction to mounting base	-	-	0.8	℃/W

MARKING



EUR	EPI Ultrafast Recovery Rectifier
40	$I_{F(AV)}$=40A
06	V_{RRM}:600V
SL	Package:TO-247J-2L

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	…

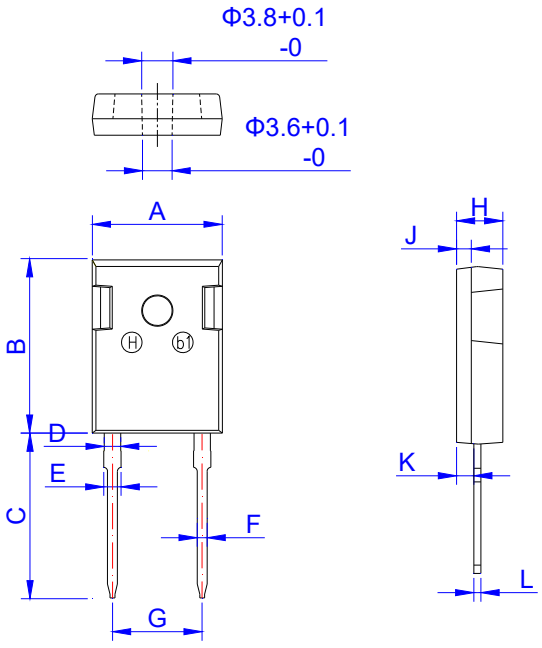
3H**x**: Batch number

ORDERING INFORMATION

J E U R 40 06 SL

- J: JieJie Microelectronics
- E: Epi
- U: Ultrafast
- R: Rectifier
- 40: $I_{F(AV)}$=40A
- 06: V_{RRM}:600V
- SL: Package: TO-247J-2L

PACKAGE MECHANICAL DATA



TO-247J-2L

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	15.50	15.80	16.10	0.610	0.622	0.634
B	20.80	21.00	21.20	0.819	0.827	0.835
C	19.70	20.00	20.30	0.776	0.787	0.799
D	1.80	2.00	2.20	0.071	0.079	0.087
E	1.90	2.10	2.30	0.075	0.083	0.091
F	1.00	1.20	1.40	0.039	0.047	0.055
G	10.50		11.30	0.413		0.445
H	4.80	5.00	5.20	0.189	0.197	0.205
J	1.90	2.00	2.10	0.075	0.079	0.083
K	2.20	2.35	2.50	0.087	0.093	0.098
L	0.41	0.60	0.79	0.016	0.024	0.031

PACKAGE INFORMATION-TO-247J-2L

OUTLINE	UNIT WEIGHT (g/PCS) TYP	TUBE (PCS)	PER CARTON (PCS)
TUBE	5.75	30	2,250

CHARACTERITICS CURVE

FIG.1: Typical forward characteristics (25℃)

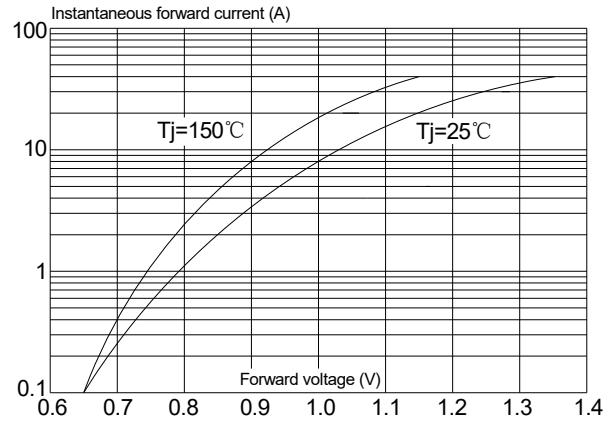


FIG.2: Typical reverse characteristics

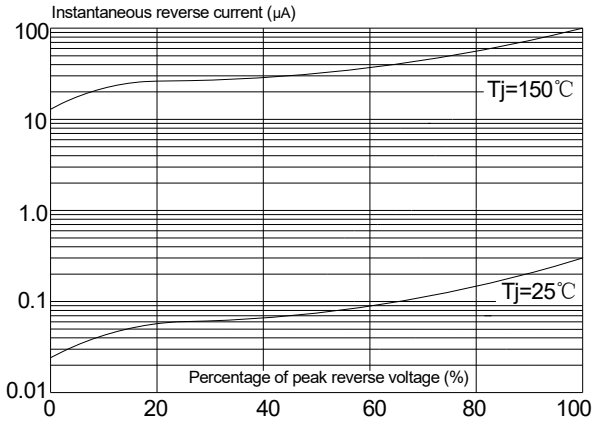


FIG.3: Maximum non-repetitive peak forward surge current(10ms single half sine-wave)

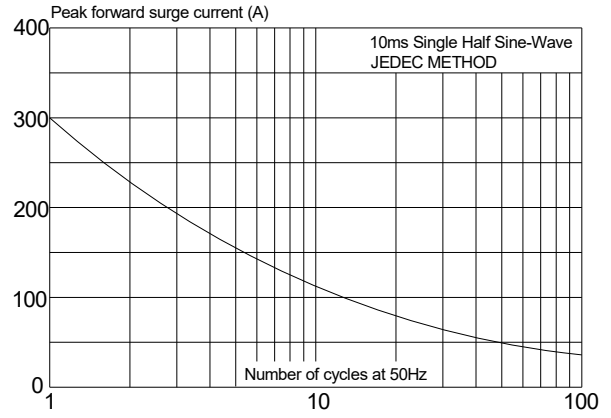


FIG.4: Maximum non-repetitive peak forward surge current(8.3ms single half sine-wave)

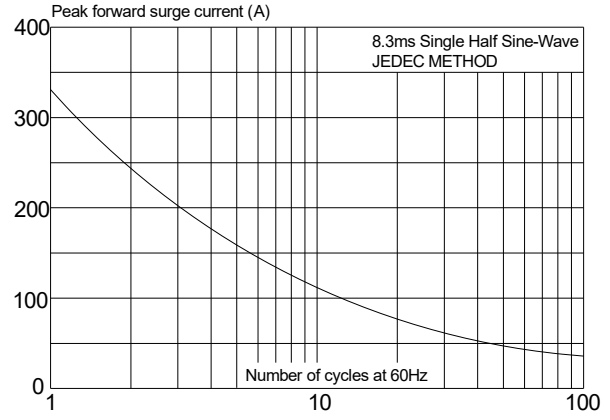


FIG.5: Forward current derating curve

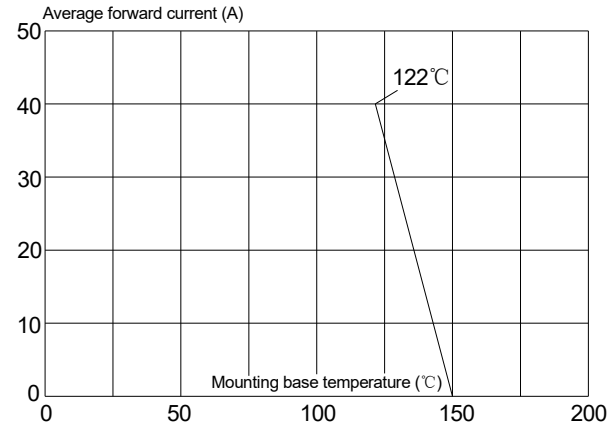


FIG.6: Reverse recovery definitions