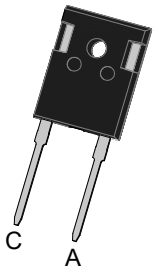
EPI PLANAR ULTRAFAST SOFT RECOVERY RECTIFIER

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
- ✧ Hyperfast recovery time
- ✧ Epitaxial planar technology
- ✧ 5th Generation soft fast recovery characteristics
- ✧ Low recovery loss



TO-247J-2L

Symbol

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	RHRG30120	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	1200	V
Maximum RMS voltage	V_{RMS}	840	V
Maximum DC blocking voltage	V_{DC}	1200	V
Average forward current at T_C=105℃	$I_{F(AV)}$	30	A
Peak forward surge current: 10ms single half sine-wave superimposed on rated load	I_{FSM}	300	A
Junction temperature and storage temperature range	T_j,T_{stg}	-55 to +175	℃

ELECTRICAL CHARACTERISTICS

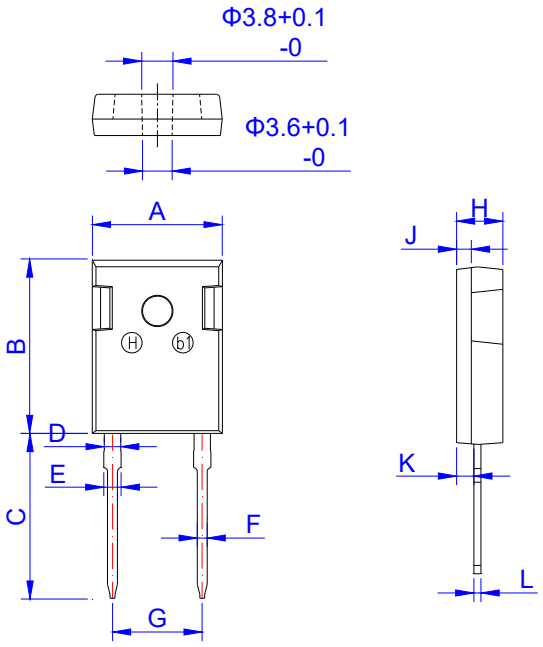
(Rating at 25℃ ambient temperature unless otherwise specified, continued)

Parameter		Symbol	Min.	Typ.	Max.	Unit
Forward voltage	I_F=30A,T_j=25℃	V_F	-	2.8	3.3	V
	I_F=30A,T_j=150℃		-	2.0	3.0	
Reverse current	V_R=1200V,T_j=25℃	I_R	-	-	10	μA
	V_R=1200V,T_j=150℃		-	-	400	
Reverse recovery time	I_F=1A,V_R=30V, dI_F/dt=200A/μs,T_j=25℃	t_{rr}	-	28	-	ns
	I_F=30A,V_R=400V, dI_F/dt=200A/μs,T_j=25℃		-	90	-	
	I_F=30A,V_R=400V, dI_F/dt=200A/μs,T_j=125℃		-	215	-	
Reverse recovery current	I_F=30A,V_R=400V, dI_F/dt=200A/μs,T_j=25℃	I_{RRM}	-	5.2	-	A
	I_F=30A,V_R=400V, dI_F/dt=200A/μs,T_j=125℃		-	14	-	
Reverse recovery charge	I_F=30A,V_R=400V, dI_F/dt=200A/μs,T_j=25℃	Q_{rr}	-	285		nC
	I_F=30A,V_R=400V, dI_F/dt=200A/μs,T_j=125℃		-	1780		

THERMAL RESISTANCES

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-c)}$	Thermal resistance from junction to case	-	-	0.8	℃/W

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

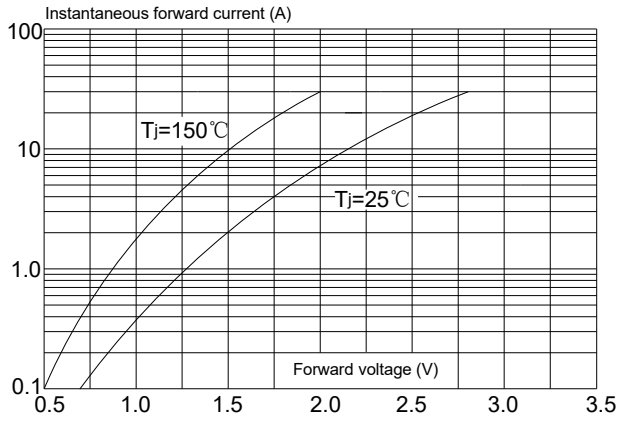


FIG.2 Typical reverse characteristics

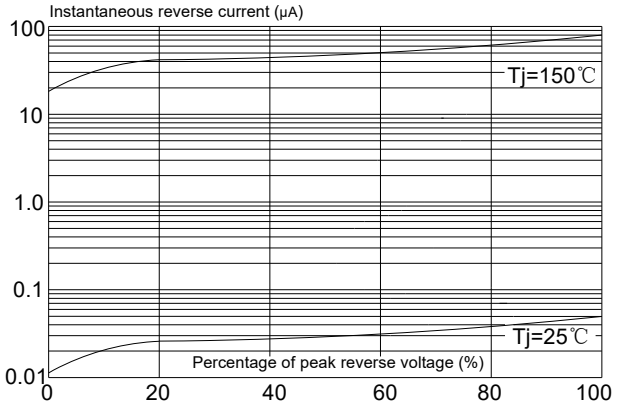


FIG.3 Maximum non-repetitive peak forward surge current(10ms single half sine-wave)

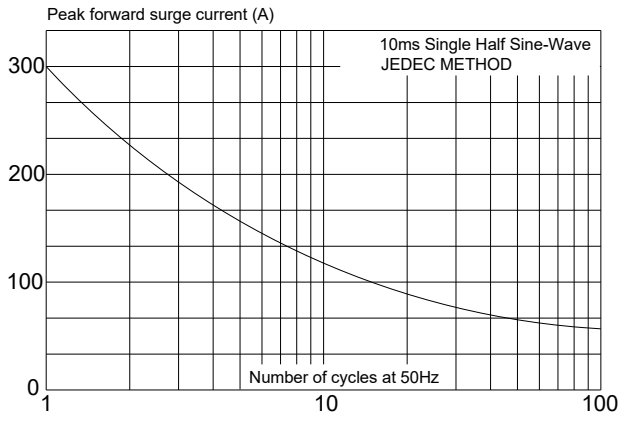


FIG.4: Forward current derating curve