



## JPUR8004SCT

### EPI PLANAR ULTRAFAST SOFT RECOVERY RECTIFIER

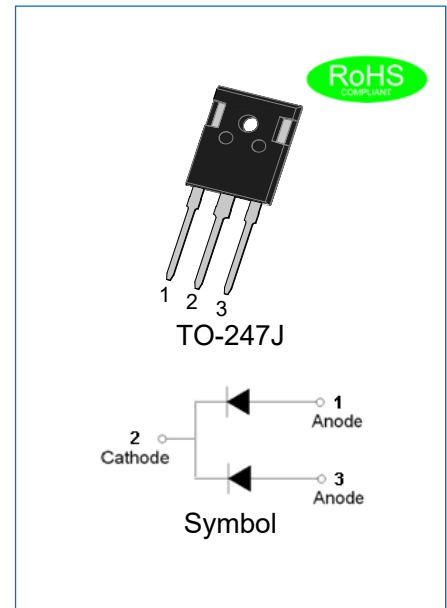
Rev.1.0

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

#### MECHANICAL DATA

- ✧ Case: TO-247J molded plastic over passivated junction
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Weight:6gram



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

Parameter	Symbol	JPUR8004SCT	Unit
Maximum repetitive peak reverse voltage (Pin1~2 or Pin3~2)	$V_{RRM}$	400	V
Maximum RMS voltage(Pin1~2 or Pin3~2)	$V_{RMS}$	280	V
Maximum DC blocking voltage(Pin1~2 or Pin3~2)	$V_{DC}$	400	V
Average forward current at $T_C=135^{\circ}C$ (Pin1,3~2)	$I_{F(AV)}$	80	A
Peak forward surge current: 10ms single half sine-wave superimposed on rated load(Pin1~2 or Pin3~2)	$I_{FSM}$	400	A
Junction temperature and storage temperature range	$T_j, T_{stg}$	-55 to +175	$^{\circ}C$

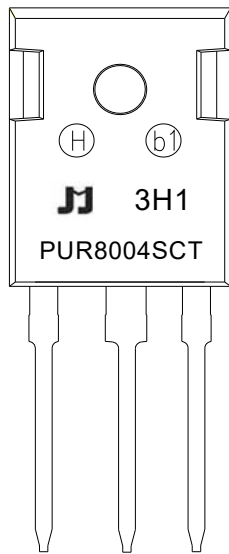
**ELECTRICAL CHARACTERISTICS**(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter		Symbol	Min.	Typ.	Max.	Unit
Forward voltage (Pin1~2 or Pin3~2)	$I_F=40A, T_j=25^\circ C$	$V_F$	-	1.15	1.35	V
	$I_F=40A, T_j=150^\circ C$		-	0.98	-	
Reverse current (Pin1~2 or Pin3~2)	$V_R=400V, T_j=25^\circ C$	$I_R$	-	-	5	$\mu A$
	$V_R=400V, T_j=150^\circ C$		-	-	300	
Reverse recovery time (Pin1~2 or Pin3~2)	$I_F=1A, V_R=30V,$ $di_F/dt=200A/\mu s, T_j=25^\circ C$	$t_{rr}$	-	26	-	ns
	$I_F=40A, V_R=200V,$ $di_F/dt=200A/\mu s, T_j=25^\circ C$		-	50	-	
	$I_F=40A, V_R=200V,$ $di_F/dt=200A/\mu s, T_j=125^\circ C$		-	95	-	
Reverse recovery current (Pin1~2 or Pin3~2)	$I_F=40A, V_R=200V,$ $di_F/dt=200A/\mu s, T_j=25^\circ C$	$I_{RM}$	-	7	-	A
	$I_F=40A, V_R=200V,$ $di_F/dt=200A/\mu s, T_j=125^\circ C$		-	16	-	
Reverse charge (Pin1~2 or Pin3~2)	$I_F=40A, V_R=200V,$ $di_F/dt=200A/\mu s, T_j=25^\circ C$	$Q_r$	-	185	-	nC
	$I_F=40A, V_R=200V,$ $di_F/dt=200A/\mu s, T_j=125^\circ C$		-	780	-	

**THERMAL RESISTANCES**

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-c)}$	Thermal resistance from junction to case(Pin1,3~2)	-	-	0.8	$^\circ C/W$

## MARKING



PUR	Planar Ultrafast Recovery Rectifier
80	$I_{F(AV)}=80A$
04	$V_{RRM}:400V$
S	Package:TO-247J
CT	Common cathode

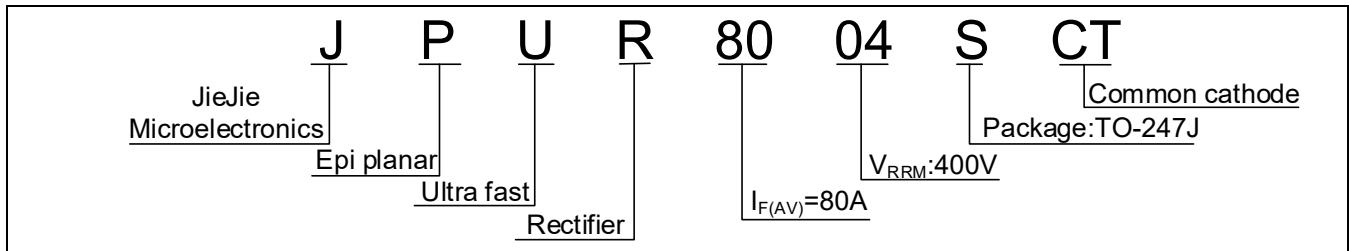
xH1: Month, 1/2/3~9/A/B/C

3x1:

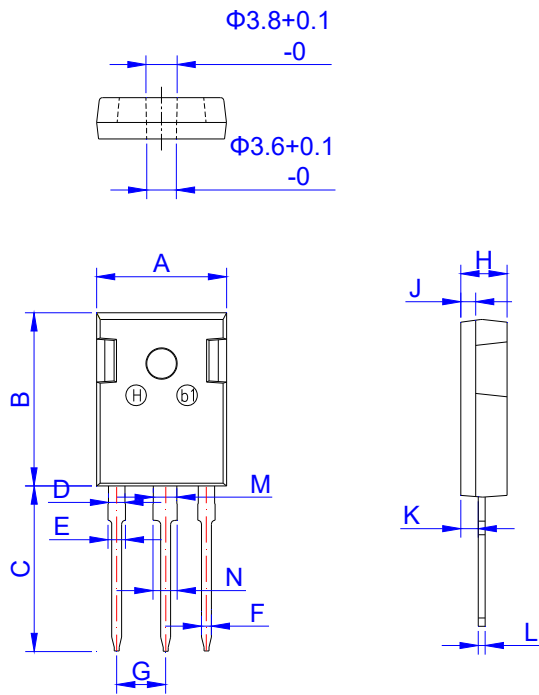
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

3Hx: Batch number

## ORDERING INFORMATION



PACKAGE MECHANICAL DATA



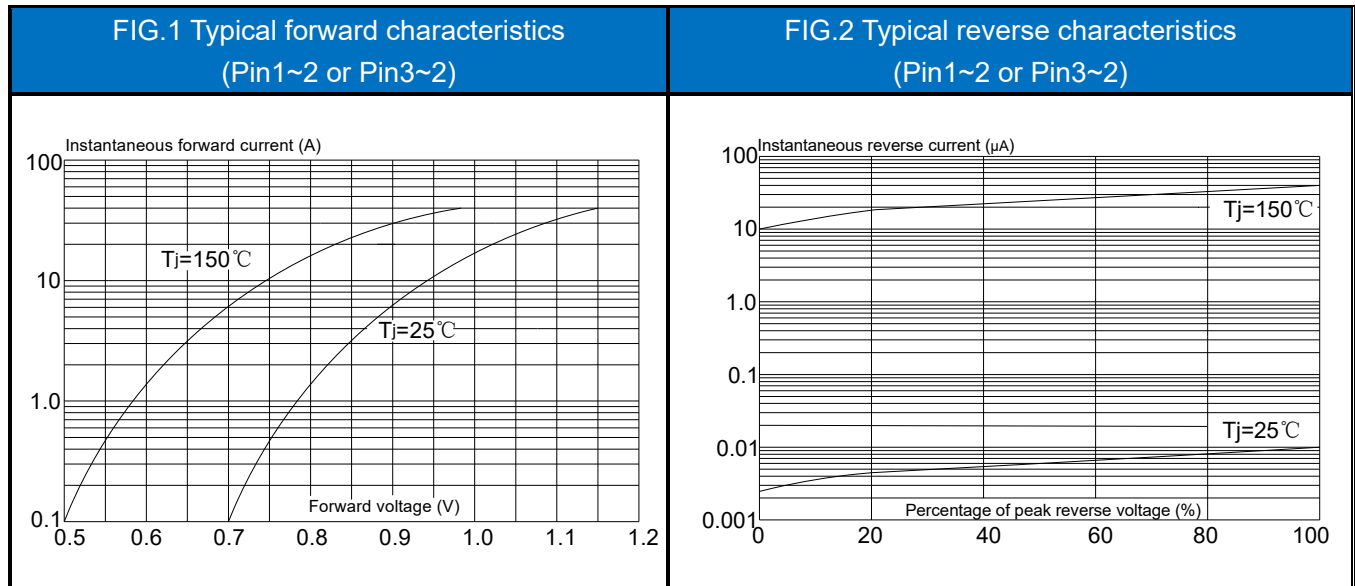
TO-247J

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	5.25		5.65	0.207		0.222
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
M	2.80	3.00	3.20	0.110	0.118	0.126
N	2.90	3.10	3.30	0.114	0.122	0.130

PACKAGE INFORMATION-TO-247J

OUTLINE	UNIT WEIGHT (g/PCS) TYP	TUBE (PCS)	PER CARTON (PCS)
TUBE	6	30	2,250

CHARACTERISTICS CURVE



<p>FIG.3: Maximum non-repetitive peak forward surge current (10ms single half sine-wave, Pin1~2 or Pin3~2)</p>	<p>FIG.4: Forward current derating curve (Pin1,3~2)</p>
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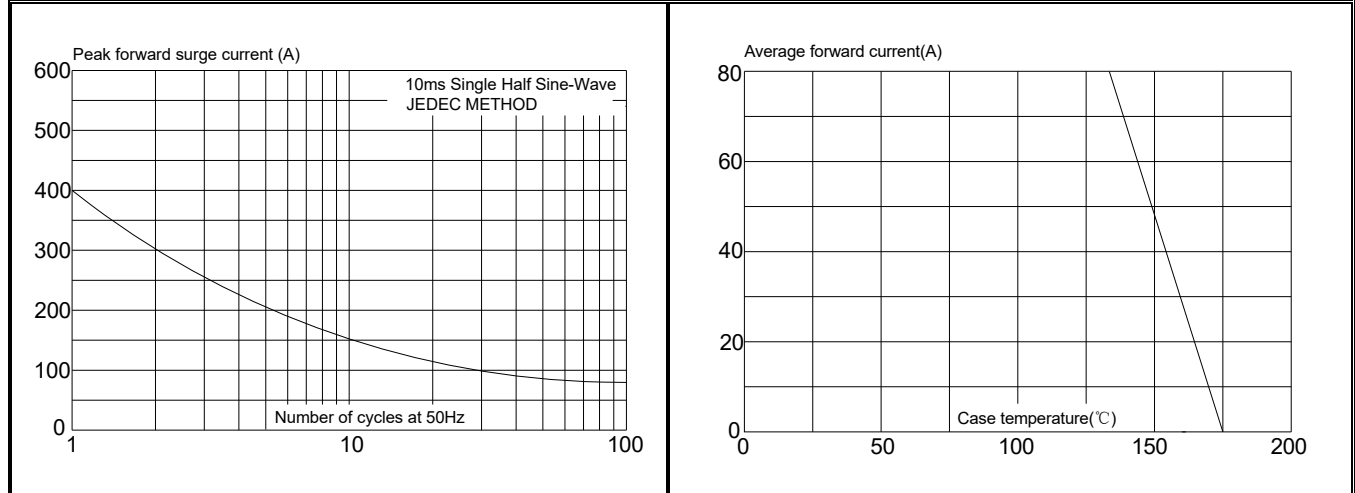
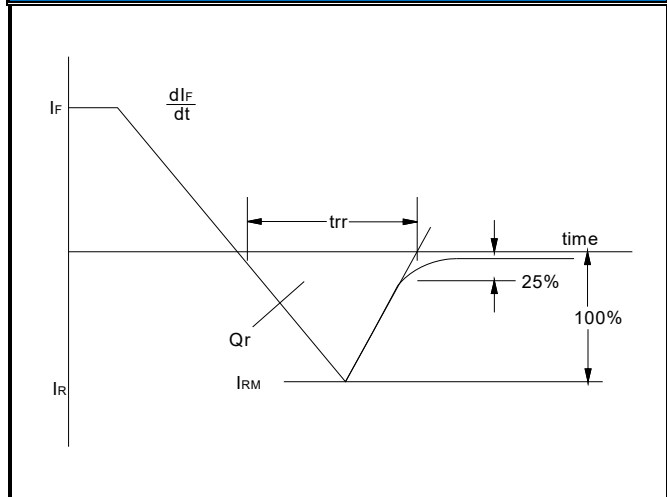


FIG.5: Reverse recovery definitions




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