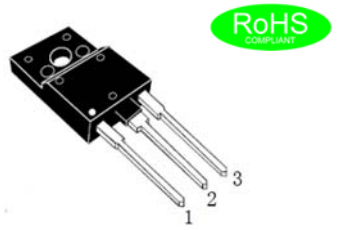
JPUR6006YCT

EPI PLANAR ULTRAFAST SOFT RECOVERY RECTIFIER

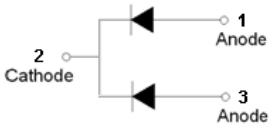
Rev.1.1

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



TO-3PF



Symbol

MECHANICAL DATA

- ✧ Case: TO-3PF molded plastic over passivated junction
- ✧ Terminals: Solder plated, solderable per J-STD-002

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

Parameter	Symbol	JPUR6006YCT	Unit
Maximum repetitive peak reverse voltage (Pin1~2 or Pin3~2)	V_{RRM}	600	V
Maximum RMS voltage(Pin1~2 or Pin3~2)	V_{RMS}	420	V
Maximum DC blocking voltage(Pin1~2 or Pin3~2)	V_{DC}	600	V
Average forward current at T_C=75℃(Pin1,3~2)	$I_{F(AV)}$	60	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load(Pin1~2 or Pin3~2)	I_{FSM}	330	A
Peak forward surge current: 10ms single half sine-wave superimposed on rated load(Pin1~2 or Pin3~2)		300	
Junction temperature and storage temperature range	T_j,T_{stg}	-55 to +175	℃

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

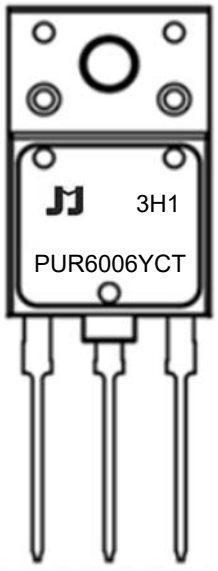
ELECTRICAL CHARACTERISTICS(Rating at 25℃ ambient temperature unless otherwise specified.)

Parameter		Symbol	Min.	Typ.	Max.	Unit
Forward voltage (Pin1~2 or Pin3~2)	I_F=30A,T_j=25℃	V_F	-	1.35	1.6	V
	I_F=30A,T_j=150℃		-	1.1	-	V
Reverse current (Pin1~2 or Pin3~2)	V_R=600V,T_j=25℃	I_R	-	-	5	μA
	V_R=600V,T_j=150℃		-	-	400	
Reverse recovery time (Pin1~2 or Pin3~2)	I_F=1A,V_R=30V, dI_F/dt=200A/μs,T_j=25℃	t_{rr}	-	28	45	ns
	I_F=30A,V_R=200V, dI_F/dt=200A/μs,T_j=25℃		-	80	-	
	I_F=30A,V_R=200V, dI_F/dt=200A/μs,T_j=125℃		-	160	-	
Reverse recovery current (Pin1~2 or Pin3~2)	I_F=30A,V_R=200V, dI_F/dt=200A/μs,T_j=25℃	I_{RM}	-	7.5	-	A
	I_F=30A,V_R=200V, dI_F/dt=200A/μs,T_j=125℃		-	17.5	-	
Reverse charge (Pin1~2 or Pin3~2)	I_F=30A,V_R=200V, dI_F/dt=200A/μs,T_j=25℃	Q_r	-	350	-	nC
	I_F=30A,V_R=200V, dI_F/dt=200A/μs,T_j=125℃		-	1550	-	

THERMAL RESISTANCES

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-c)}$	Thermal resistance from junction to case(Pin1,3~2)	-	-	2.5	℃/W

MARKING



PUR	Planar Ultrafast Recovery Rectifier
60	$I_{F(AV)}$=60A
06	V_{RRM}:600V
Y	Package: TO-3PF
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	…

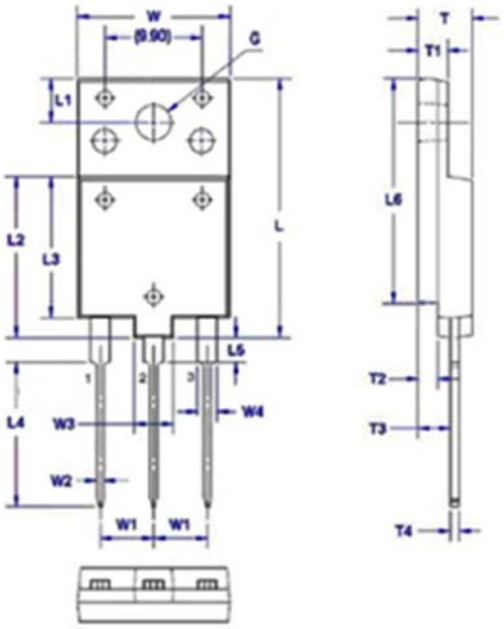
3H**x**: Batch number

ORDERING INFORMATION

J P U R 60 06 Y CT

- J: JieJie Microelectronics
- P: Epi planar
- U: Ultra fast
- R: Rectifier
- 60: $I_{F(AV)}$=60A
- 06: V_{RRM}:600V
- Y: Package:TO-3PF
- CT: Common cathode

PACKAGE MECHANICAL DATA



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
W	15.25	15.7	0.600	0.618
W1	5.15	5.75	0.203	0.226
W2	0.65	0.95	0.026	0.037
W3	3.80	4.20	0.150	0.165
W4	1.70	2.30	0.067	0.091
L	26.3	26.7	1.035	1.051
L1	4.4	4.6	0.173	0.181
L2	16.3	16.7	0.642	0.657
L3	14.1	14.9	0.555	0.587
L4	14.15	15.0	0.557	0.591
L5	2.3	2.7	0.091	0.106
L6	21.5	24.5	0.846	0.965
T	5.3	5.7	0.209	0.224
T1	2.8	3.2	0.110	0.126
T2	1.8	2.2	0.071	0.087
T3	3.1	3.5	0.122	0.138
T4	0.8	1.1	0.031	0.043
φG	3.3	3.9	0.130	0.154

PACKAGE INFORMATION-TO-3PF

OUTLINE	TUBE (PCS)	PER CARTON (PCS)
TUBE	30	2,400

CHARACTERITICS CURVE

FIG.1 Typical forward characteristics (Pin1~2 or Pin3~2)

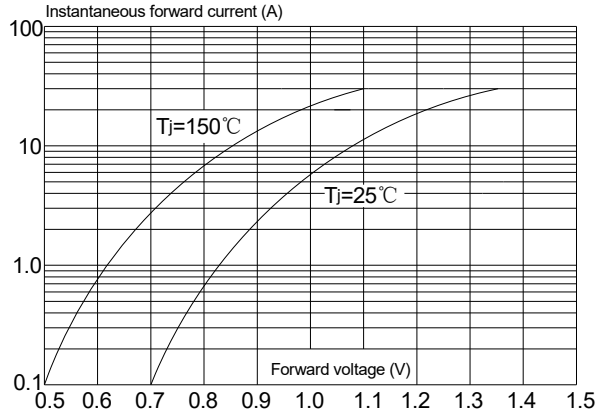


FIG.2 Typical reverse characteristics (Pin1~2 or Pin3~2)

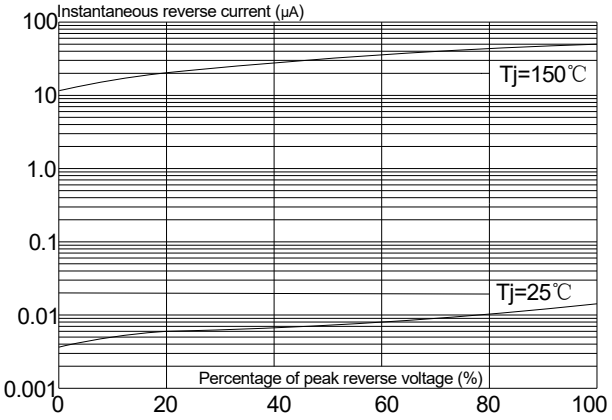


FIG.3 Maximum non-repetitive peak forward surge current(8.3ms single half sine-wave, Pin1~2 or Pin3~2)

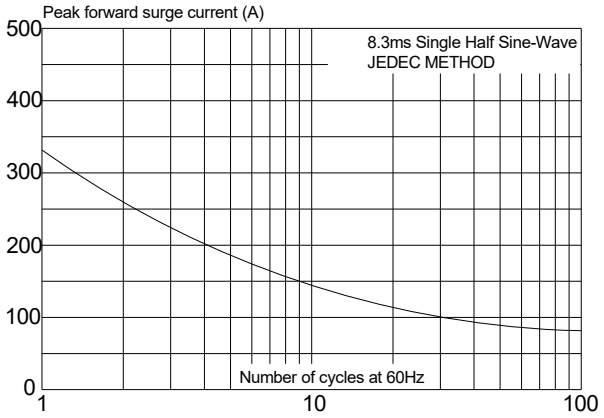


FIG.4: Maximum non-repetitive peak forward surge current(10ms single half sine-wave, Pin1~2 or Pin3~2)

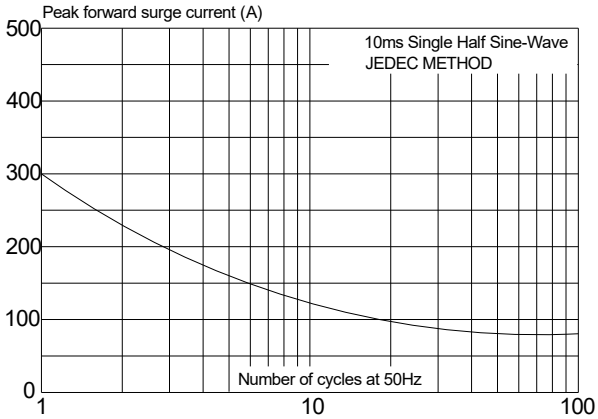


FIG.5: Forward current derating curve (Pin1,3~2)

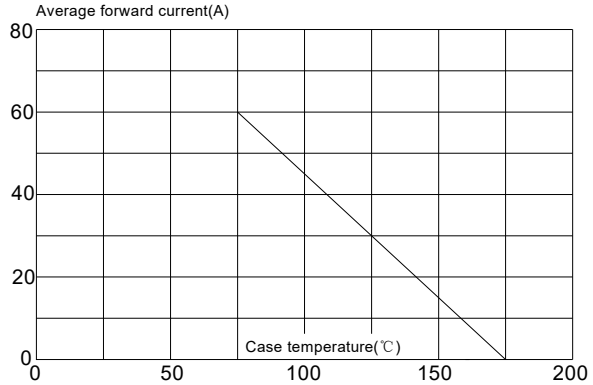
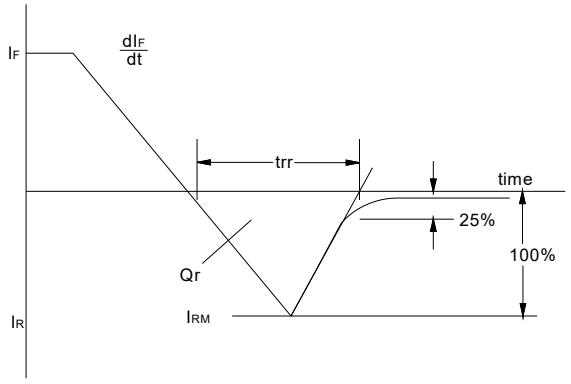


FIG.6: Reverse recovery definitions



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