



JPUR8003NCT-CO

EPI PLANAR ULTRAFAST SOFT RECOVERY RECTIFIER

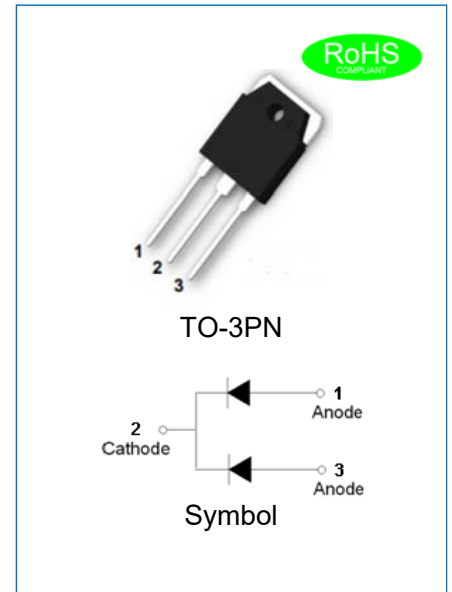
Rev.1.0

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-3PN molded plastic over passivated junction
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Weight: 5.15gram



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

Parameter	Symbol	JPUR8003NCT-CO	Unit
Maximum repetitive peak reverse voltage (Pin1~2 or Pin3~2)	V_{RRM}	300	V
Maximum DC blocking voltage(Pin1~2 or Pin3~2)	V_{DC}	300	V
Average forward current at $T_C=130^{\circ}\text{C}$ (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	$^{\circ}\text{C}$

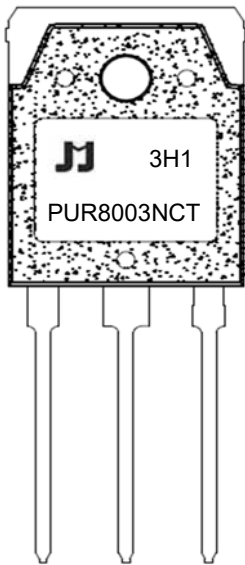
ELECTRICAL CHARACTERISTICS(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter		Symbol	Min.	Typ.	Max.	Unit
Forward voltage (Pin1~2 or Pin3~2)	$I_F=40A, T_J=25^{\circ}C$	V_F	-	1.05	1.2	V
	$I_F=40A, T_J=150^{\circ}C$		-	0.9	-	V
Reverse current (Pin1~2 or Pin3~2)	$V_R=300V, T_J=25^{\circ}C$	I_R	-	-	5	μA
	$V_R=300V, T_J=150^{\circ}C$		-	-	300	
Reverse recovery time (Pin1~2 or Pin3~2)	$I_F=1A, V_R=30V,$ $dl_F/dt=200A/\mu s, T_J=25^{\circ}C$	t_{rr}	-	23	-	ns
	$I_F=40A, V_R=200V,$ $dl_F/dt=200A/\mu s, T_J=25^{\circ}C$		-	40	-	
	$I_F=40A, V_R=200V,$ $dl_F/dt=200A/\mu s, T_J=125^{\circ}C$		-	70	-	
Reverse recovery current (Pin1~2 or Pin3~2)	$I_F=40A, V_R=200V,$ $dl_F/dt=200A/\mu s, T_J=25^{\circ}C$	I_{RM}	-	5.2	-	A
	$I_F=40A, V_R=200V,$ $dl_F/dt=200A/\mu s, T_J=125^{\circ}C$		-	12	-	
Reverse charge (Pin1~2 or Pin3~2)	$I_F=40A, V_R=200V,$ $dl_F/dt=200A/\mu s, T_J=25^{\circ}C$	Q_r	-	110	-	nC
	$I_F=40A, V_R=200V,$ $dl_F/dt=200A/\mu s, T_J=125^{\circ}C$		-	440	-	

THERMAL RESISTANCES

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-c)}$	Thermal resistance from junction to case(Pin1,3~2)	-	-	1	$^{\circ}C/W$

MARKING



PUR	Planar Ultrafast Recovery Rectifier
80	$I_{F(AV)}=80A$
03	$V_{RRM}:300V$
N	Package:TO-3PN
CT	Common cathode

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

3x1:

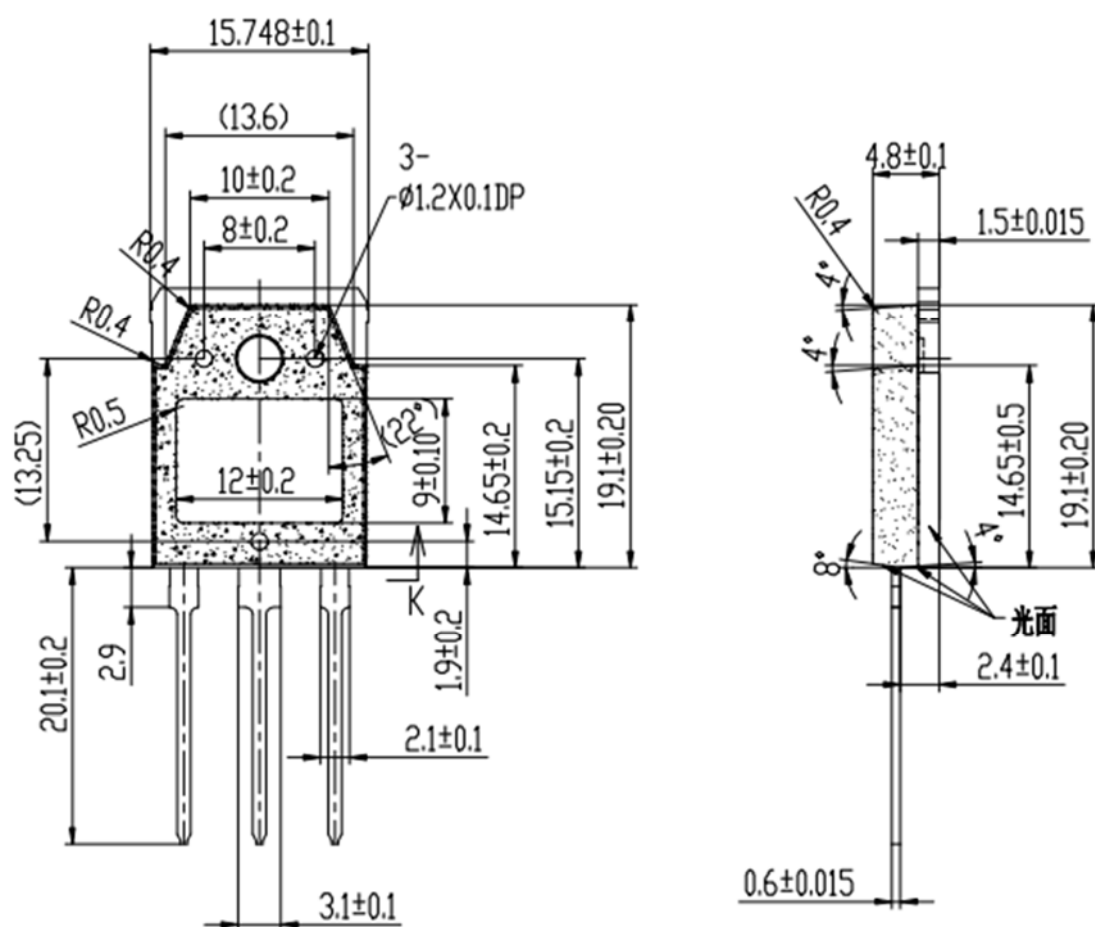
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

3Hx: Batch number

ORDERING INFORMATION

J	P	U	R	80	03	N	CT	-CO
JieJie Microelectronics	Epi planar	Ultra fast	Rectifier	$I_{F(AV)}=80A$	$V_{RRM}:300V$	Package:TO-3PN	Common cathode	Process code

PACKAGE MECHANICAL DATA



PACKAGE INFORMATION-TO-3PN

OUTLINE	UNIT WEIGHT (g/PCS) TYP	TUBE (PCS)	PER CARTON (PCS)
TUBE	5.15	30	2,400

CHARACTERISTICS CURVE

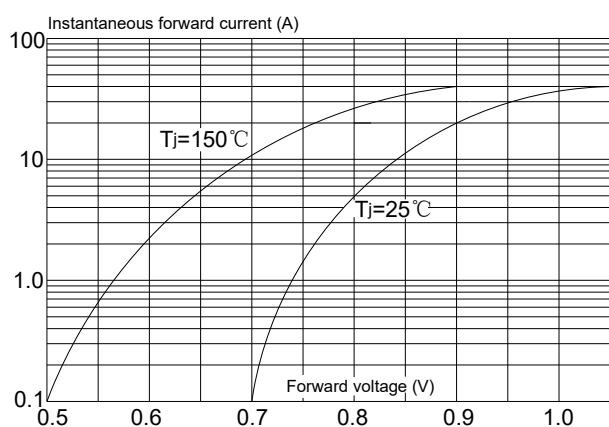
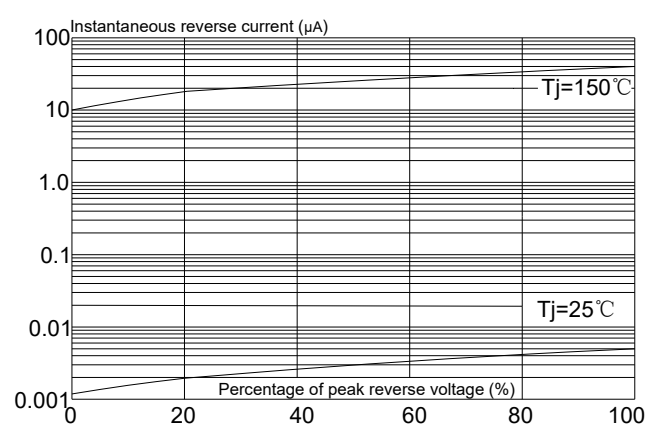
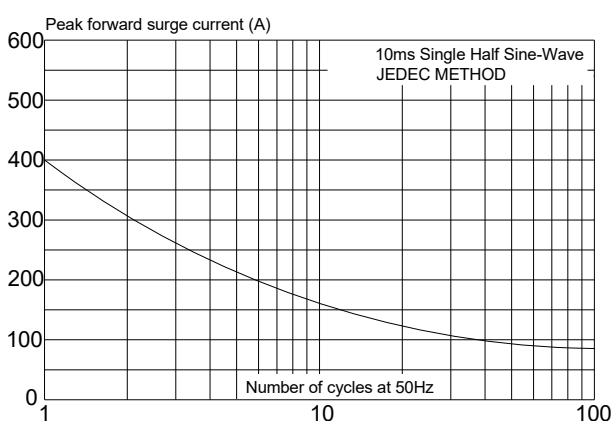
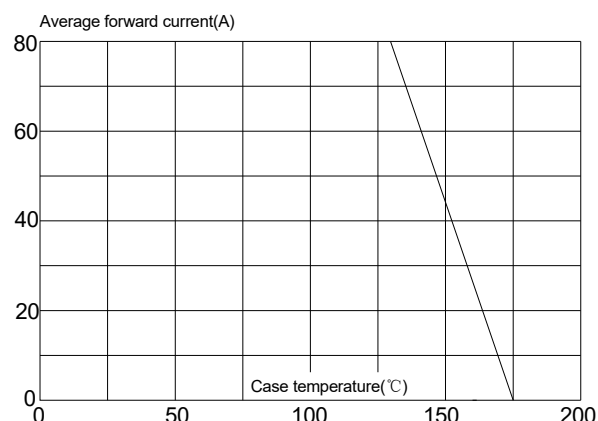
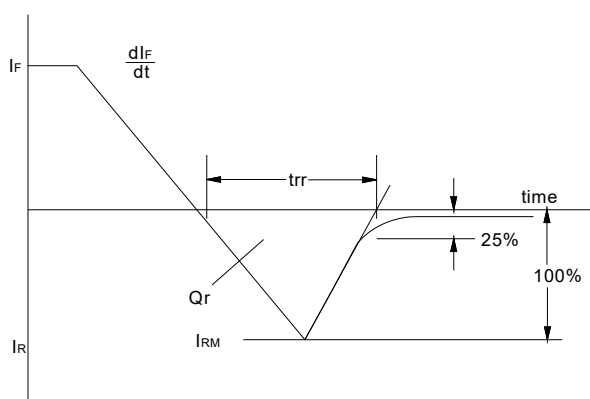
FIG.1 Typical forward characteristics
(Pin1~2 or Pin3~2)FIG.2 Typical reverse characteristics
(Pin1~2 or Pin3~2)FIG.3: Maximum non-repetitive peak forward surge current
(10ms single half sine-wave, Pin1~2 or Pin3~2)FIG.4: Forward current derating curve
(Pin1,3~2)

FIG.5: Reverse recovery definitions



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