



JPUR8003NCT

EPI PLANAR ULTRAFAST SOFT RECOVERY RECTIFIER

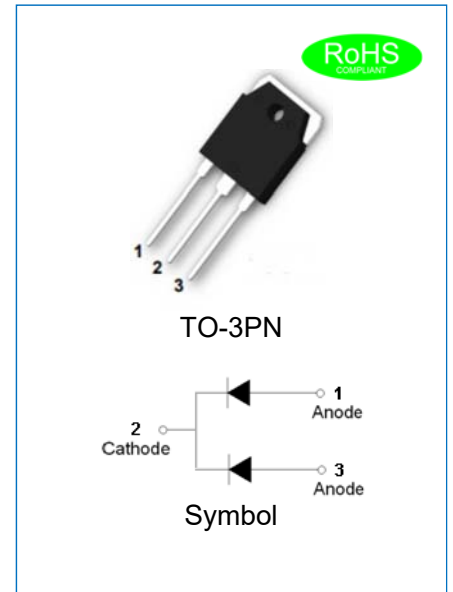
Rev.1.0

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:5gram



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

Parameter	Symbol	JPUR8003NCT	Unit
Maximum repetitive peak reverse voltage (Pin1~2 or Pin3~2)	V_{RRM}	300	V
Maximum RMS voltage(Pin1~2 or Pin3~2)	V_{RMS}	210	V
Maximum DC blocking voltage(Pin1~2 or Pin3~2)	V_{DC}	300	V
Average forward current at $T_C=130^{\circ}C$ (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	°C

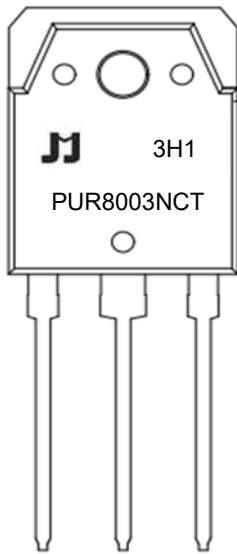
ELECTRICAL CHARACTERISTICS(Rating at 25°C ambient temperature unless otherwise specified.)

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

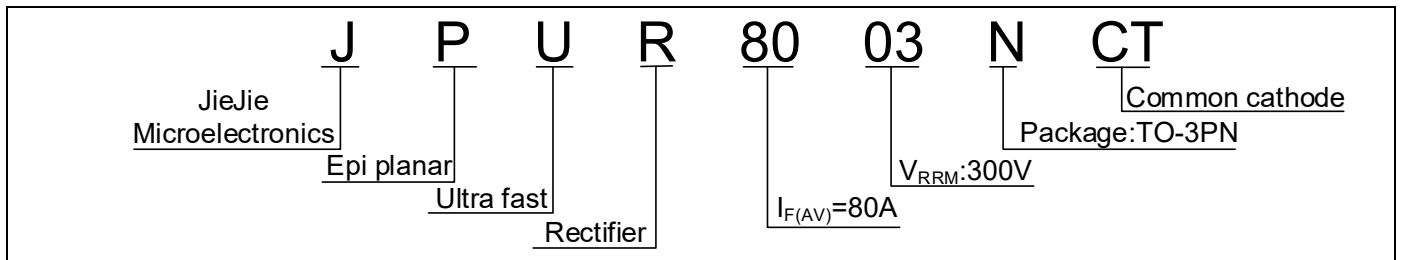
xH1: Month, 1/2/3~9/A/B/C

3x1:

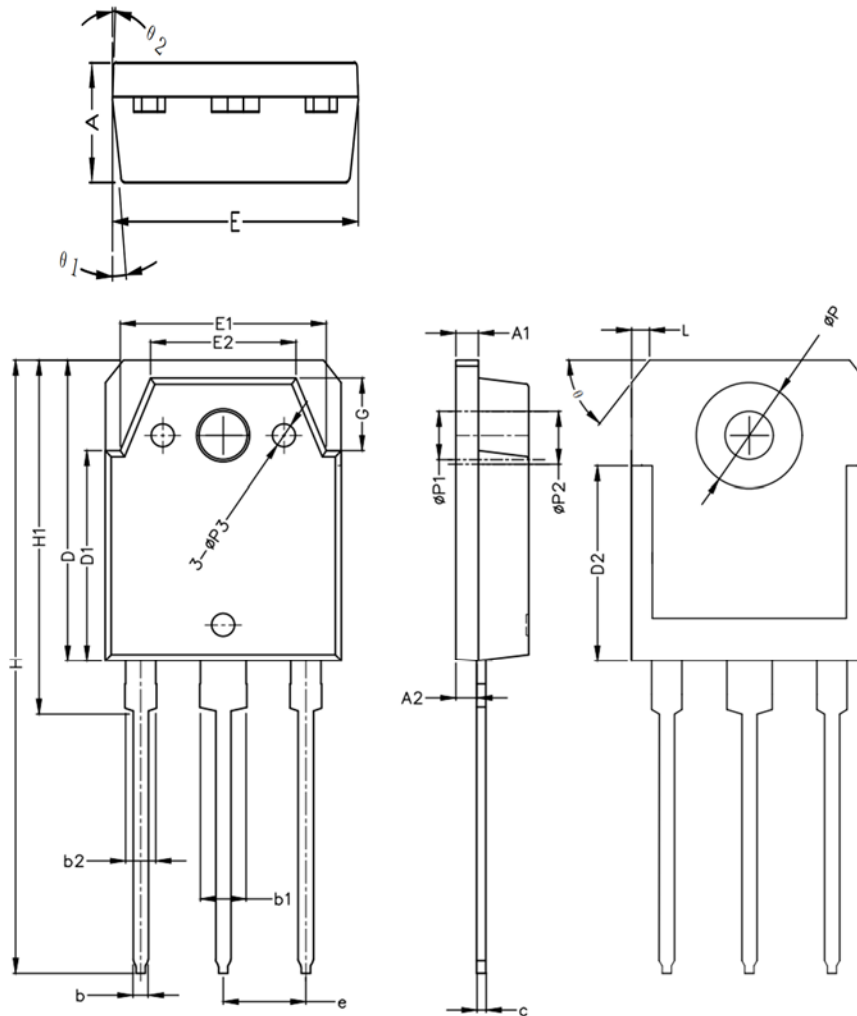
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

3Hx: Batch number

ORDERING INFORMATION



PACKAGE MECHANICAL DATA

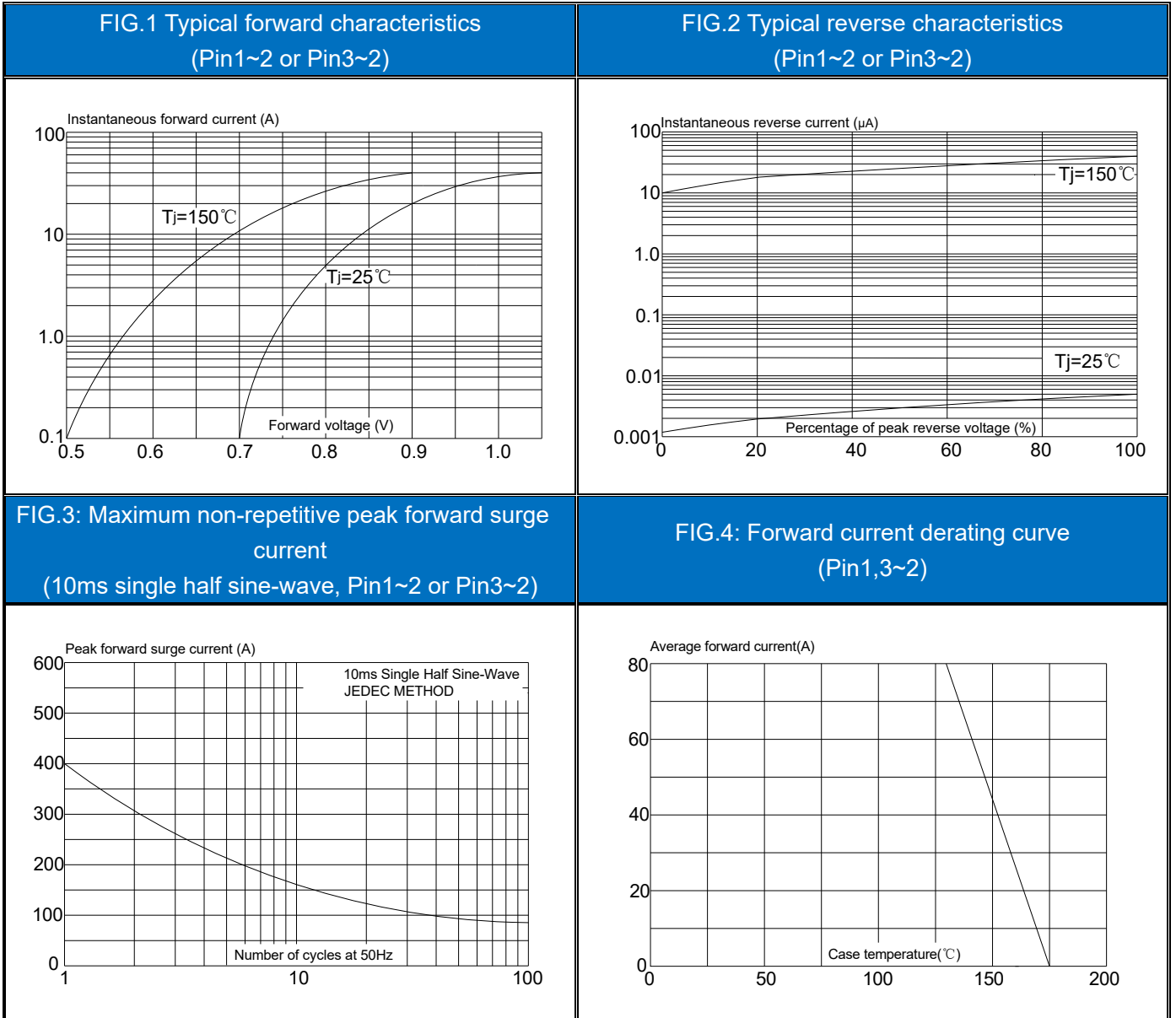


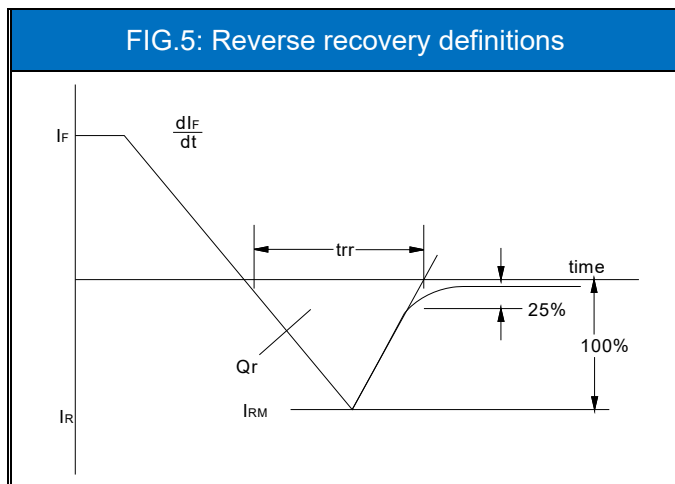
Symbol	Millimeters			Inches			Symbol	Millimeters			Inches		
	Min	Typ	Max	Min	Typ	Max		Min	Typ	Max	Min	Typ	Max
A	4.60	4.80	5.00	0.181	0.189	0.197	e	5.45BSC			0.215BSC		
A1	1.40	1.50	1.60	0.055	0.059	0.063	G	4.60	4.80	5.00	0.181	0.189	0.197
A2	1.33	1.38	1.43	0.052	0.054	0.056	H	40.20	40.50	40.70	1.583	1.594	1.602
b	0.80	1.00	1.20	0.031	0.039	0.047	H1	23.25	23.45	23.65	0.915	0.923	0.931
b1	2.80	3.00	3.20	0.110	0.118	0.126	L	1.00REF			0.039REF		
b2	1.80	2.00	2.20	0.071	0.079	0.087	ϕP	6.90	7.00	7.10	0.272	0.276	0.280
c	0.50	0.60	0.70	0.020	0.024	0.028	$\phi P1$	3.20REF			0.126REF		
D	19.75	19.90	20.05	0.778	0.783	0.789	$\phi P2$	3.50REF			0.138REF		
D1	13.70	13.90	14.10	0.539	0.547	0.555	$\phi P3$	1.40	1.50	1.60	0.055	0.059	0.063
D2	12.9REF			0.508REF			Q	60°REF			60°REF		
E	15.40	15.60	15.80	0.606	0.614	0.622	Q1	5°	7°	9°	5°	7°	9°
E1	13.40	13.60	15.80	0.528	0.535	0.622	Q2	1°	3°	5°	1°	3°	5°
E2	9.40	9.60	9.80	0.370	0.378	0.386							

PACKAGE INFORMATION-TO-3PN

OUTLINE	UNIT WEIGHT (g/PCS) TYP	TUBE (PCS)	PER CARTON (PCS)
TUBE	5	30	2,250

CHARACTERISTICS CURVE





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