



## JPCR1002ECT

### EPI PLANAR HYPERFAST SOFT RECOVERY RECTIFIER

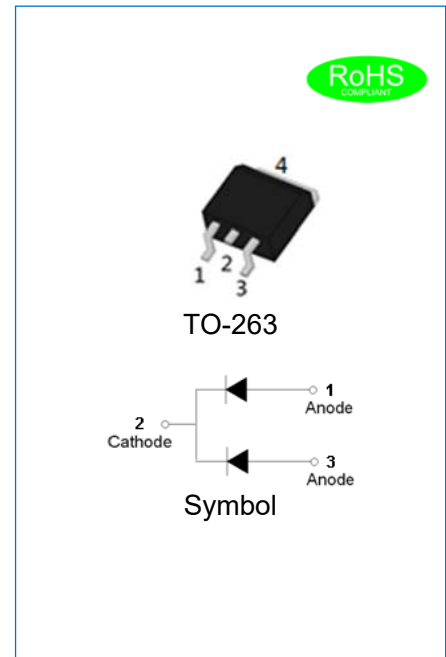
Rev.1.1

#### 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
- ✧ Hyperfast recovery time
- ✧ Low recovery loss
- ✧ Epitaxial planar technology
- ✧ 5th Generation soft fast recovery characteristics
- ✧ Output rectifiers in high-frequency switched-mode power supplies

#### MECHANICAL DATA

- ✧ Case: TO-263 molded plastic over passivated junction
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Weight: 1.55 gram



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

Parameter	Symbol	JPCR1002ECT	Unit
Maximum repetitive peak reverse voltage (Pin1~2 or Pin3~2)	$V_{RRM}$	200	V
Maximum RMS voltage(Pin1~2 or Pin3~2)	$V_{RMS}$	140	V
Maximum DC blocking voltage(Pin1~2 or Pin3~2)	$V_{DC}$	200	V
Average forward current at $T_c=150^\circ\text{C}$ (Pin1,3~2)	$I_{F(AV)}$	10	A
Peak forward surge current: 10ms single half sine-wave superimposed on rated load(Pin1~2 or Pin3~2)	$I_{FSM}$	50	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load(Pin1~2 or Pin3~2)	$I_{FSM}$	55	A
Junction temperature and storage temperature range	$T_j, T_{stg}$	-55 to +175	°C

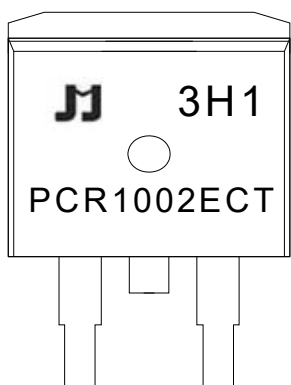
## ELECTRICAL CHARACTERISTICS (Rating at 25°C ambient temperature unless otherwise specified.)

Parameter		Symbol	Min.	Typ.	Max.	Unit
Forward voltage (Pin1~2 or Pin3~2)	$I_F=5A, T_j=25^\circ C$	$V_F$	-	-	1.1	V
	$I_F=5A, T_j=150^\circ C$		-	-	0.895	
Reverse current (Pin1~2 or Pin3~2)	$V_R=200V, T_j=25^\circ C$	$I_R$	-	-	5	$\mu A$
	$V_R=200V, T_j=150^\circ C$		-	-	200	
Reverse recovery time (Pin1~2 or Pin3~2)	$I_F=1A, V_R=30V,$ $di/dt=100A/\mu s, T_j=25^\circ C$	$t_{rr}$	-	25	-	ns
	$I_F=0.5A, I_R=1A, I_{RR}=0.25A$		-	-	25	

## THERMAL RESISTANCES

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

## MARKING



PCR	Planar Hyperfast Recovery Rectifier
10	$I_{F(AV)}=10A$
02	$V_{RRM}:200V$
E	Package: TO-263
CT	Common cathode

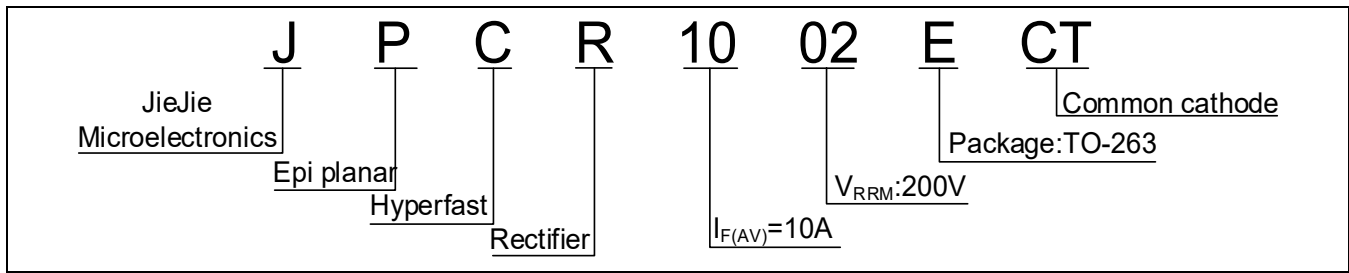
$\underline{x}H1$ : Month, 1/2/3~9/A/B/C

$3\underline{x}1$ :

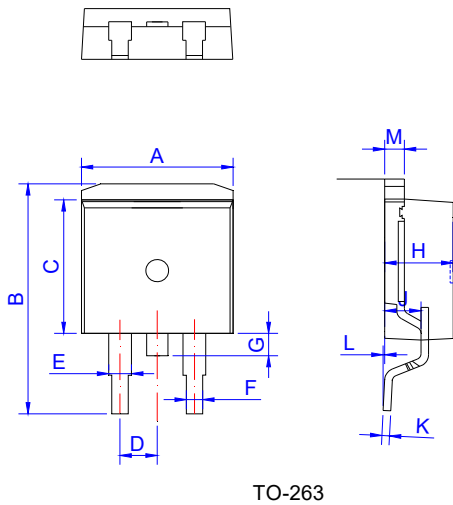
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

$3H\underline{x}$ : Batch number

## ORDERING INFORMATION

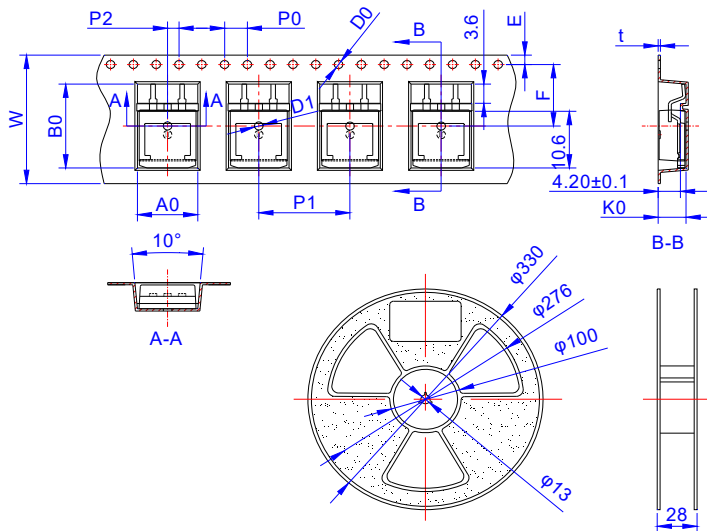


## PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	9.90		10.20	0.390		0.402
B	14.70		15.80	0.579		0.622
C	8.80		9.60	0.346		0.378
D		2.54			0.100	
E	1.20		1.40	0.047		0.055
F	0.75		0.85	0.030		0.033
G			1.75			0.069
H	4.40		4.70	0.173		0.185
J	2.30		2.70	0.091		0.106
K	0.38		0.55	0.015		0.022
L	0	0.10	0.25	0	0.004	0.010
M	1.17		1.37	0.046		0.054

## TAPE AND REEL SPECIFICATION-TO-263

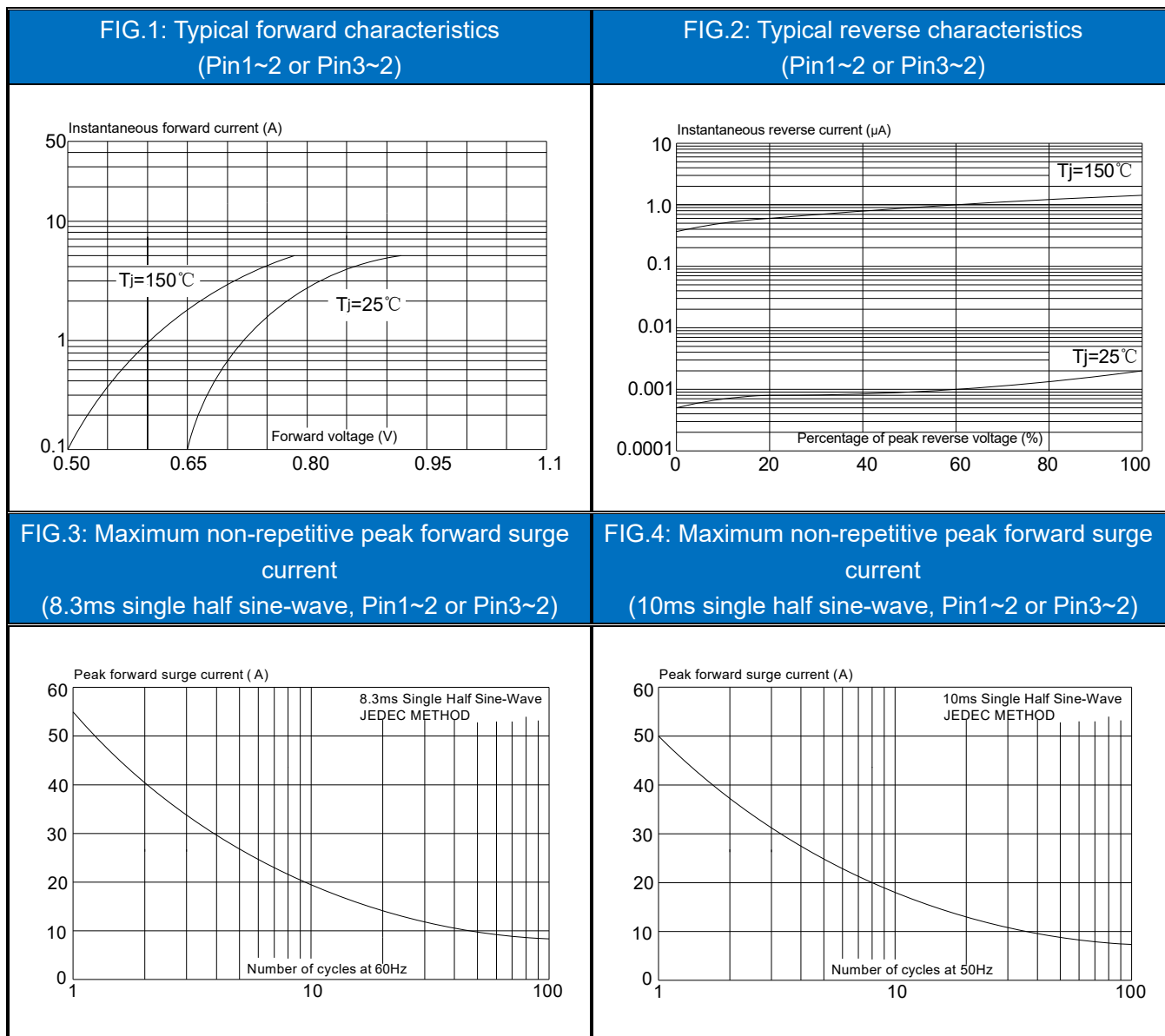


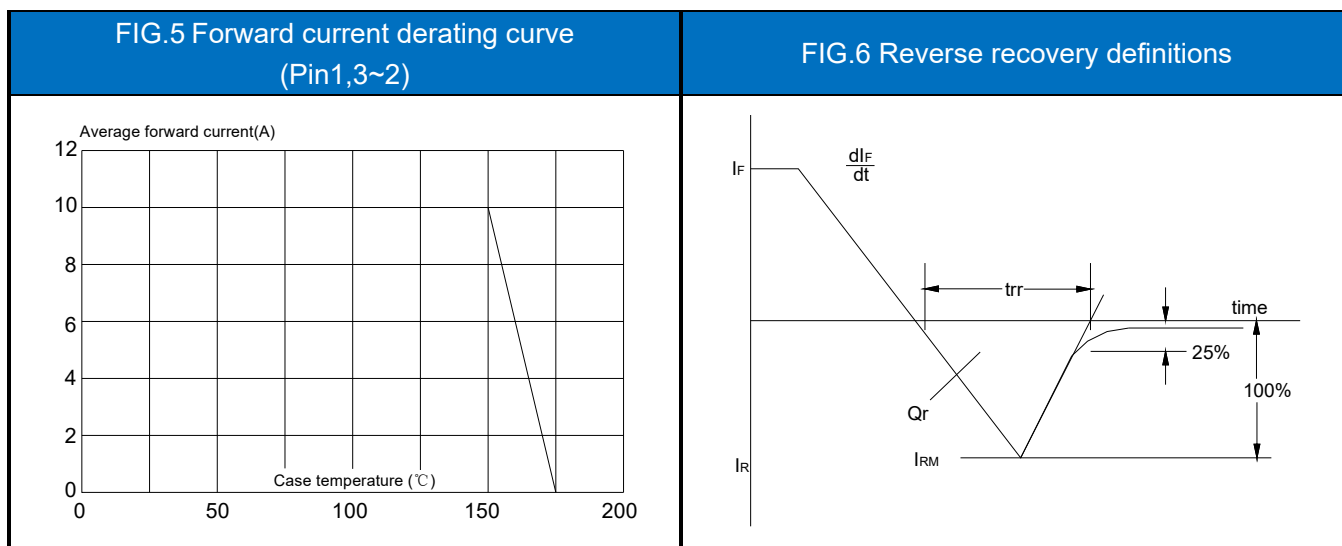
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
W	23.70	24.00	24.30	0.933	0.945	0.957
E	1.65	1.75	1.85	0.065	0.069	0.073
F	11.40	11.50	11.60	0.449	0.453	0.457
D0	-	1.50	1.60	-	0.059	0.063
D1	-	1.50	1.60	-	0.059	0.063
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	15.90	16.00	16.10	0.626	0.630	0.634
P2	1.90	2.00	2.10	0.075	0.079	0.083
A0	10.80	10.90	11.00	0.425	0.429	0.433
B0	16.20	16.30	16.40	0.638	0.642	0.646
K0	4.80	4.90	5.00	0.189	0.193	0.197
t	0.35	0.40	0.45	0.014	0.016	0.018

## PACKAGE INFORMATION-TO-263

PART No.	UNIT WEIGHT (g/PCS) TYP	TUBE (PCS)	PER CARTON (PCS)
JPCR1002ECT	1.55	50	5,000
PART No.	UNIT WEIGHT (g/PCS) TYP	REEL (PCS)	PER CARTON (PCS)
JPCR1002ECT-R	1.55	800	4,000

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