

**JECR2002ZCT****EPI HYPERFAST RECOVERY RECTIFIER**

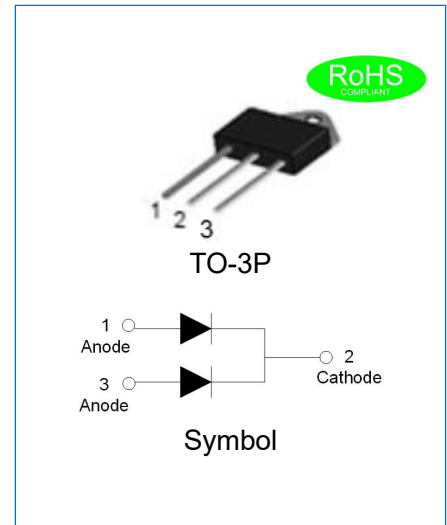
Rev.1.2

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 and soft recovery characteristics
- ✧ Low recovery loss
- ✧ Applications for PFC circuit, inverter circuit

MECHANICAL DATA

- ✧ Case: TO-3P molded plastic over passivated junction
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Internally constructed isolated package is offered for ease of heat sinking with highest isolation voltage
- ✧ Weight: 4.805gram

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

Parameter	Symbol	JECR2002ZCT	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	200	V
Maximum RMS voltage	V_{RMS}	140	V
Maximum DC blocking voltage	V_{DC}	200	V
Average forward current at $T_C=100^{\circ}\text{C}$	$I_{F(AV)}$	20	A
Peak forward surge current: 10ms single half sine-wave superimposed on rated load (per diode)	I_{FSM}	150	A
Junction temperature and storage temperature range	T_J, T_{stg}	-55 to +150	$^{\circ}\text{C}$

ISOLATION CHARACTERISTICS

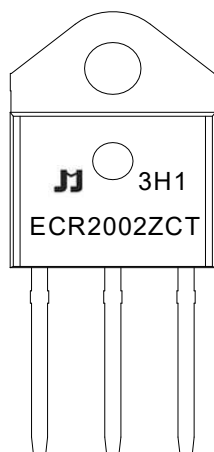
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
$V_{isol(RMS)}$	RMS isolation voltage	50 Hz $\leq f \leq$ 60Hz; RH \leq 65 %; from all pins to external heatsink; sinusoidal waveform; clean and dust free	-	-	2500	V
C_{isol}	Isolation capacitance	from cathode to external heatsink	-	10	-	pF

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

Parameter		Symbol	Min.	Typ.	Max.	Unit
Forward voltage @ $I_F=10A$	$T_j=25^{\circ}C$	V_F	-	-	1.1	V
	$T_j=150^{\circ}C$		-	-	0.9	
Reverse current at rated DC blocking voltage	$T_j=25^{\circ}C$	I_R	-	-	5	μA
	$T_j=150^{\circ}C$		-	-	200	
Reverse recovery time	$I_F=0.5A, I_R=1A, I_{RR}=0.25A$	t_{rr}	-	-	25	ns
	$I_F=1A, V_R=30V, di_F/dt=100A/\mu s$		-	18	25	

THERMAL RESISTANCES

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

MARKING


ECR	EPI Hyperfast Recovery Rectifier
20	$I_{F(AV)}=20A$
02	$V_{RRM}:200V$
Z	Package:TO-3P
CT	Common cathode

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

$3\underline{x}1$:

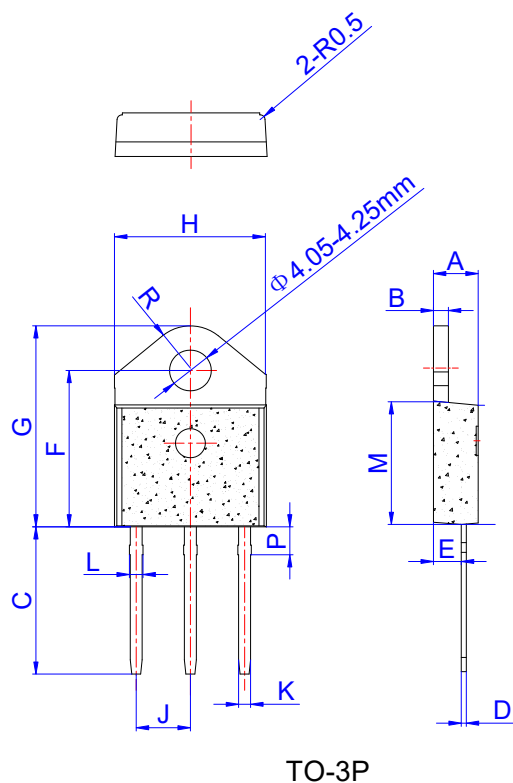
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

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

ORDERING INFORMATION

J	E	C	R	20	02	Z	CT
JIEJIE Microelectronics	EPI Hyperfast	Rectifier		$I_{F(AV)}=20A$	$V_{RRM}:200V$	Package:TO-3P	Common cathode

PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	1.45		1.55	0.057		0.061
C	14.35		15.60	0.565		0.614
D	0.50		0.70	0.020		0.028
E	2.70		2.90	0.106		0.114
F	15.80		16.50	0.622		0.650
G	20.40		21.10	0.803		0.831
H	15.10		15.50	0.594		0.610
J	5.40		5.65	0.213		0.222
K	1.10		1.40	0.043		0.055
L	1.35		1.50	0.053		0.059
M	12.37		12.77	0.487		0.503
P	2.80		3.00	0.110		0.118
R		4.35			0.171	

PACKAGE INFORMATION-TO-3P

OUTLINE	UNIT WEIGHT (g/PCS) typ.	TUBE (PCS)	PER CARTON (PCS)
TUBE	4.805	30	2,250

CHARACTERISTICS CURVE

FIG.1: Typical forward characteristics

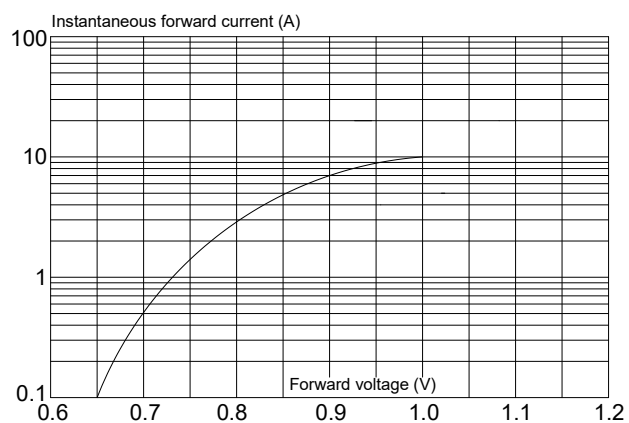


FIG.2: Typical reverse characteristics

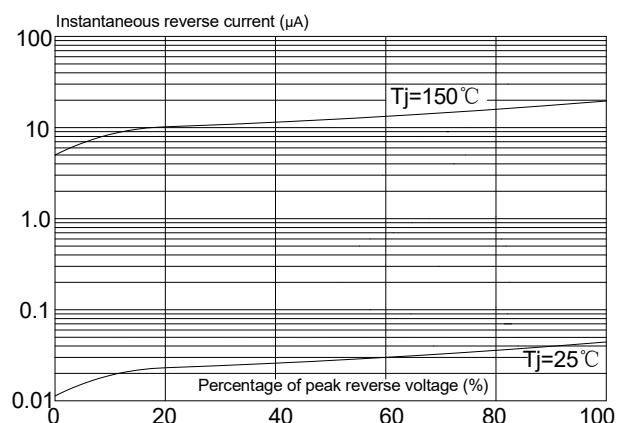


FIG.3: Maximum non-repetitive peak forward surge current

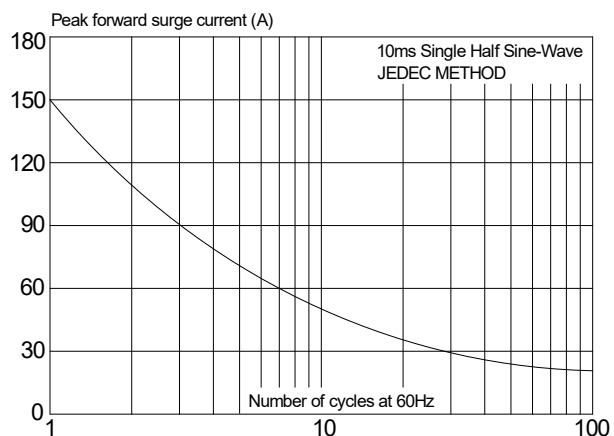
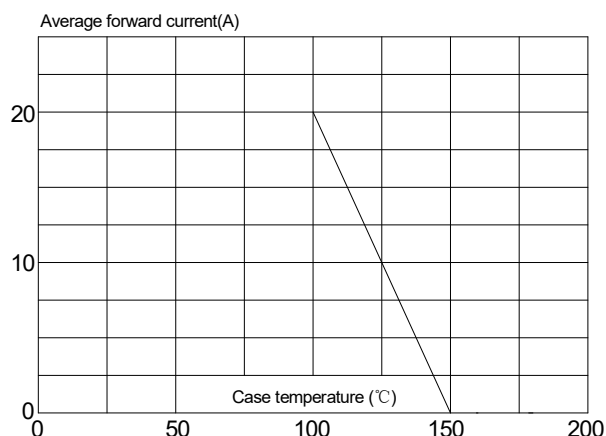


FIG.4: Forward current derating curve



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