



## JECR2002CCT

### EPI HYPERFAST RECOVERY RECTIFIER

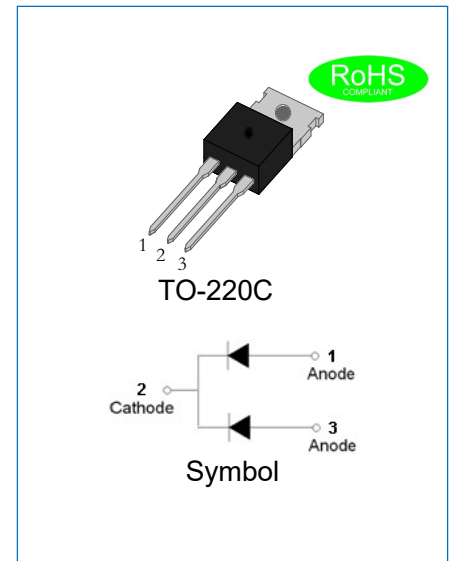
Rev.1.1

#### 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 and soft recovery characteristics
- ✧ Low recovery loss
- ✧ Home appliance power supply

#### MECHANICAL DATA

- ✧ Case: TO-220C molded plastic over passivated junction
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Weight: 2.08 gram



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

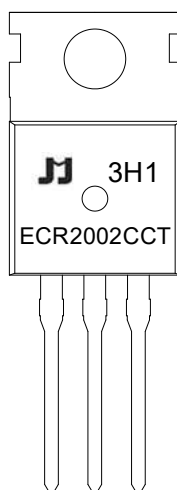
Parameter	Symbol	JECR2002CCT	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	200	V
Maximum RMS voltage	$V_{RMS}$	140	V
Maximum DC blocking voltage	$V_{DC}$	200	V
Average forward current at $T_C=100^{\circ}\text{C}$	$I_{F(AV)}$	20	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load(per diode)	$I_{FSM}$	137	A
Peak forward surge current: 10ms single half sine-wave superimposed on rated load(per diode)		125	
Junction temperature and storage temperature range	$T_j, T_{stg}$	-55 to +150	$^{\circ}\text{C}$

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

Parameter		Symbol	Min.	Typ.	Max.	Unit
Forward voltage	$I_F=8A, T_J=150^{\circ}C$	$V_F$	-	0.76	0.85	V
	$I_F=20A, T_J=25^{\circ}C$		-	1.1	1.25	V
	$I_F=10A, T_J=25^{\circ}C$		-	1.0	1.1	V
DC reverse current at rated DC blocking voltage	$T_J=25^{\circ}C$	$I_R$	-	-	5	$\mu A$
	$T_J=150^{\circ}C$		-	-	200	
Recovered charge	$I_F=2A, V_R=30V, dl_F/dt=20A/\mu s, T_J=25^{\circ}C$	$Q_r$	-	13.5	-	nC
	$I_F=1A, V_R=30V, dl_F/dt=100A/\mu s, T_J=25^{\circ}C$		-	14.5	-	
Peak reverse recovery current	$I_F=1A, V_R=30V, dl_F/dt=100A/\mu s, T_J=25^{\circ}C$	$I_{RM}$	-	1.7	-	A
Reverse recovery time	$I_F=1A, V_R=30V, dl_F/dt=100A/\mu s$	$t_{rr}$	-	18	25	ns

**THERMAL RESISTANCES**

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-c)}$	Thermal resistance from junction to case	-	2.0	-	$^{\circ}C/W$

**MARKING**


ECR	EPI Hyperfast Recovery Rectifier
20	$I_{F(AV)}=20A$
02	$V_{RRM}:200V$
C	Package:TO-220C
CT	Common cathode

xH1: Month, 1、2、3 ~ 9、A、B、C

3x1:

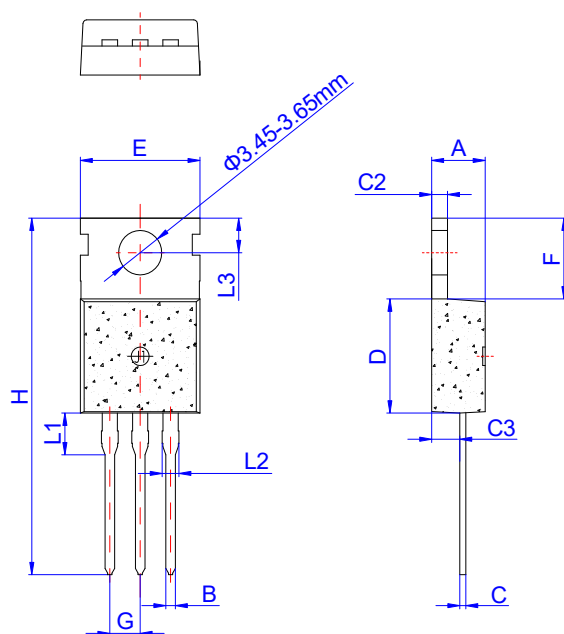
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

3Hx: Batch number

## ORDERING INFORMATION

J	E	C	R	20	02	C	CT
JIEJIE Microelectronics	EPI Hyperfast	Rectifier		$I_{F(AV)}=20A$	$V_{RRM}=200V$	Common cathode Package:TO-220C	

## PACKAGE MECHANICAL DATA



TO-220C

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.70		0.90	0.028		0.035
C	0.45		0.60	0.018		0.024
C2	1.23		1.32	0.048		0.052
C3	2.20		2.60	0.087		0.102
D	8.90		9.90	0.350		0.390
E	9.90		10.3	0.390		0.406
F	6.30		6.90	0.248		0.272
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.39			0.133	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
Φ		3.6			0.142	

## PACKAGE INFORMATION-TO-220C

OUTLINE	UNIT WEIGHT (g/PCS) typ.	TUBE (PCS)	PER CARTON (PCS)
TUBE	2.08	50	5,000

## CHARACTERISTICS CURVE

FIG.1: Typical forward characteristics (25°C)

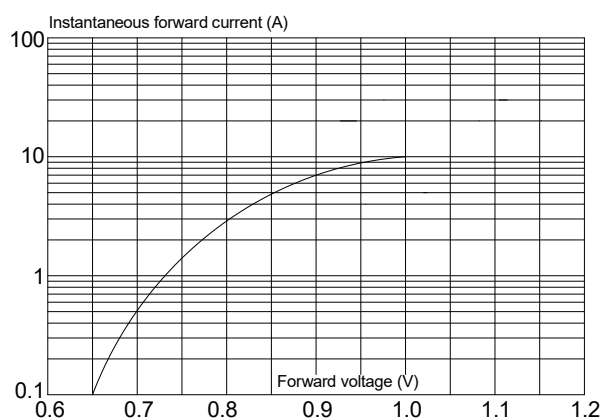


FIG.2: Typical reverse characteristics

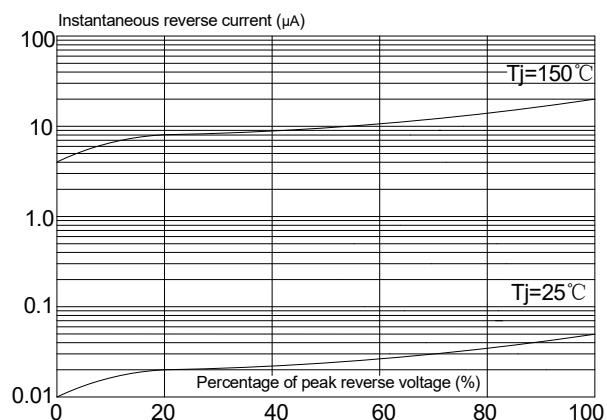


FIG.3: Maximum non-repetitive peak forward surge current(10ms single half sine-wave)

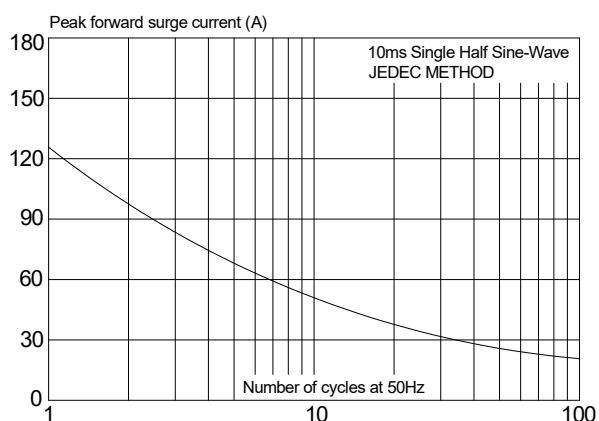


FIG.4: Maximum non-repetitive peak forward surge current(8.3ms single half sine-wave)

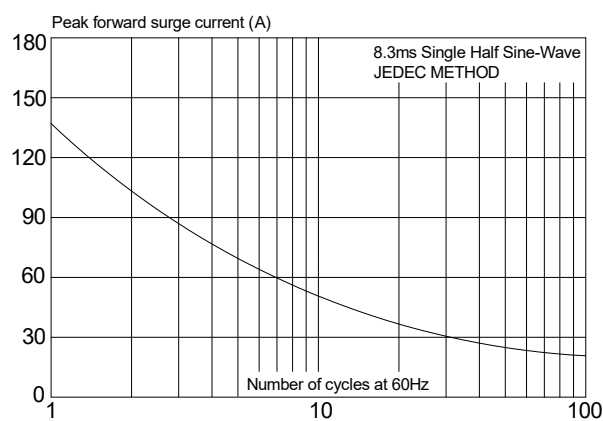


FIG.5: Forward current derating curve

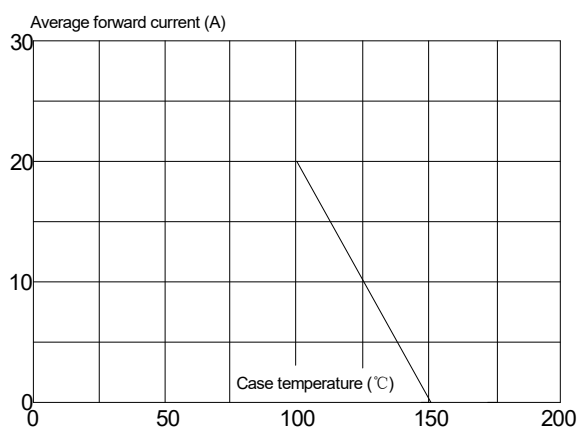
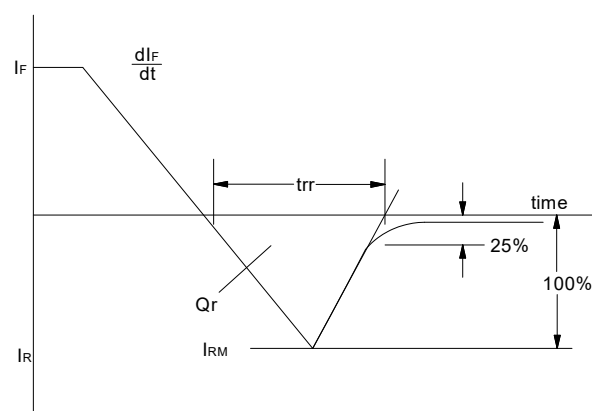


FIG.6: Reverse recovery definitions



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