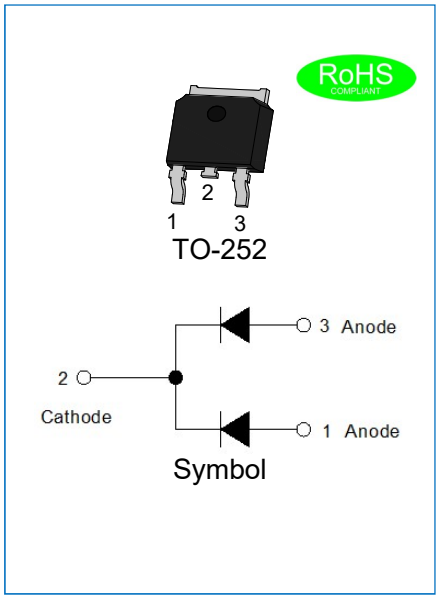
JECR1002KCT

EPI HYPERFAST SOFT 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 output rectifiers in high-frequency switched-mode power supplies



MECHANICAL DATA

- ✧ Case: TO-252 molded plastic over passivated junction
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Weight:0.329gram

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

Parameter	Symbol	JECR1002KCT	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=120℃	$I_{F(AV)}$	10	A
Peak forward surge current: 10ms single half sine-wave superimposed on rated load（per diode）	I_{FSM}	50	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load（per diode）	I_{FSM}	55	A
Junction temperature and storage temperature range	T_j,T_{stg}	-55 to +150	℃

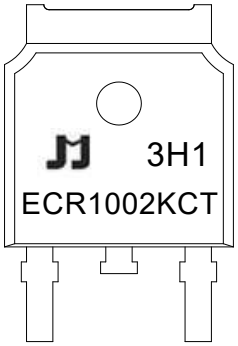
ELECTRICAL CHARACTERISTICS(Rating at 25℃ ambient temperature unless otherwise specified.)

Parameter		Symbol	Min.	Typ.	Max.	Unit
Forward voltage	I_F=5A,T_j=25℃	V_F	-	-	1.1	V
	I_F=5A,T_j=150℃		-	-	0.895	
DC reverse current at rated DC blocking voltage	T_j=25℃	I_R	-	-	5	μA
	T_j=150℃		-	-	200	
Reverse recovery time	I_F=0.5A,I_R=1A,I_R=0.25A, T_j=25°℃	t_{rr}	-	-	25	ns

THERMAL RESISTANCES

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-c)}$	Thermal resistance from junction to case	-	-	14	℃/W

MARKING



ECR	EPI Hyperfast Recovery Rectifier
10	$I_{F(AV)}$=10A
02	V_{RRM}:200V
K	Package:TO-252
CT	Common cathode

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

3**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	…

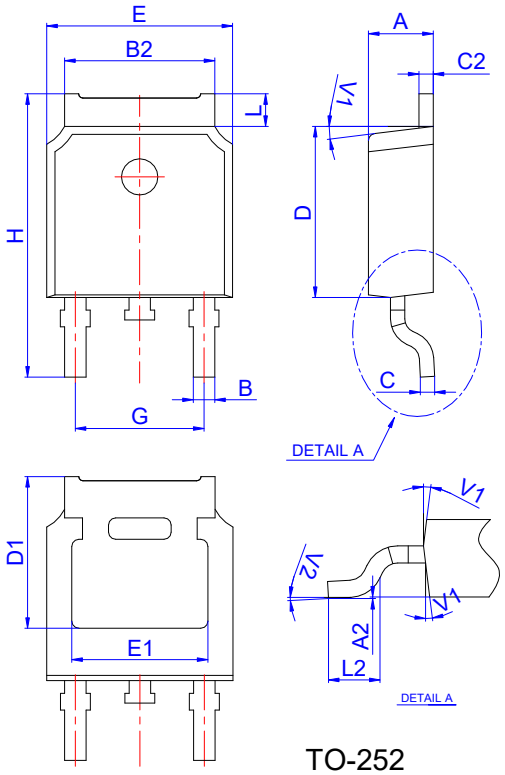
3H**x**: Batch number

ORDERING INFORMATION

J E C R 10 02 K CT

- J: JIEJIE Microelectronics
- E: Epi
- C: Hyper fast
- R: Rectifier
- 10: $I_{F(AV)}$=10A
- 02: V_{RRM}:200V
- K: Package:TO-252
- CT: Common cathode

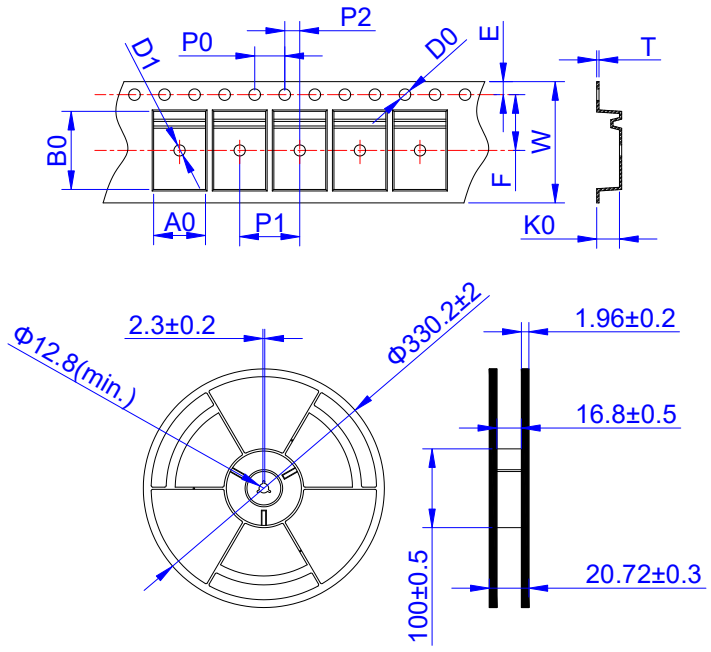
PACKAGE MECHANICAL DATA



TO-252

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.10		2.50	0.083		0.098
A2	0		0.10	0		0.004
B	0.66		0.86	0.026		0.034
B2	5.18		5.48	0.202		0.216
C	0.40		0.60	0.016		0.024
C2	0.44		0.58	0.017		0.023
D	5.90		6.30	0.232		0.248
D1	5.30REF			0.209REF		
E	6.40		6.80	0.252		0.268
E1	4.63			0.182		
G	4.47		4.67	0.176		0.184
H	9.50		10.70	0.374		0.421
L	1.09		1.21	0.043		0.048
L2	1.35		1.65	0.053		0.065
V1		7°			7°	
V2	0°		6°	0°		6°

REEL SPECIFICATION -TO-252



Ref.	Dimensions	
	Millimeters	Inches
W	Max:16.3	Max:0.642
E	1.75±0.10	0.069±0.004
F	7.50±0.10	0.295±0.004
D0	1.55±0.05	0.061±0.002
D1	Min:1.50	Min:0.059
P0	4.00±0.10	0.157±0.004
P1	8.00±0.10	0.315±0.004
P2	2.00±0.10	0.079±0.004
A0	6.90±0.10	0.272±0.004
B0	10.50±0.10	0.413±0.004
K0	2.70±0.10	0.106±0.004
T	0.30±0.05	0.012±0.002

OUTLINE	UNIT WEIGHT (g/PCS) TYP	REEL (PCS)	PER CARTON (PCS)	TAPE & REEL
TAPING	0.329	2,500	25,000	13inch

CHARACTERITICS CURVE

FIG.1: Typical forward characteristics

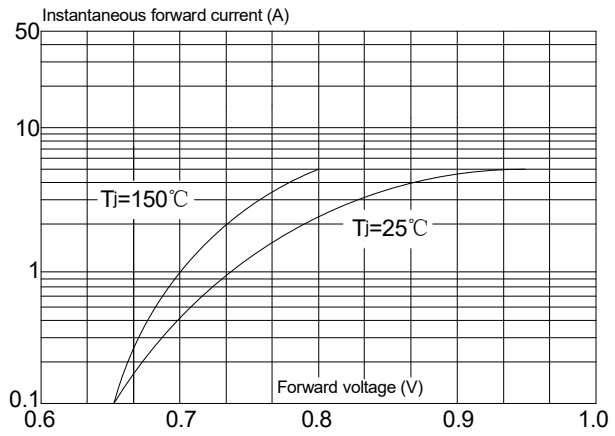


FIG.2: Typical reverse characteristics

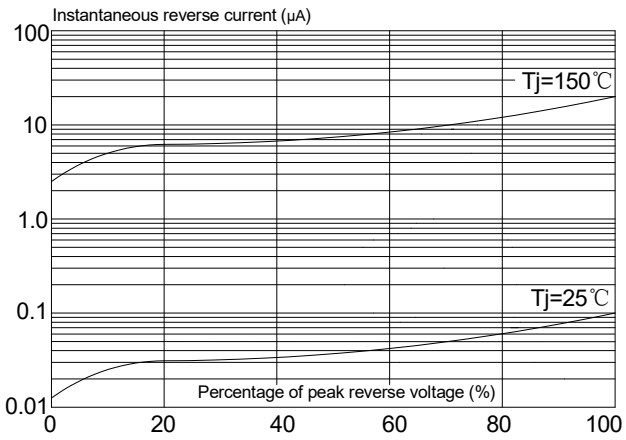


FIG.3: Maximum non-repetitive peak forward surge current(8.3ms single half sine-wave)

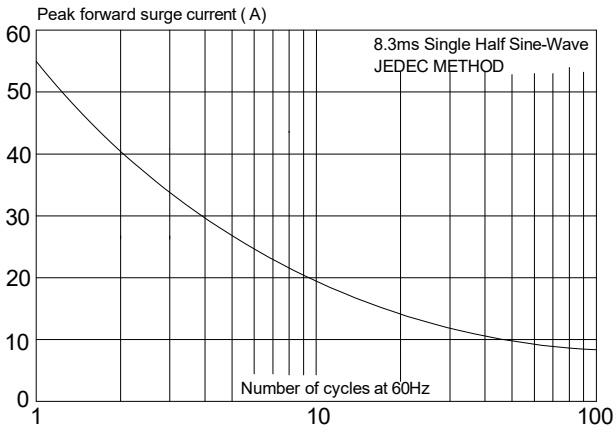


FIG.4: Maximum non-repetitive peak forward surge current(10ms single half sine-wave)

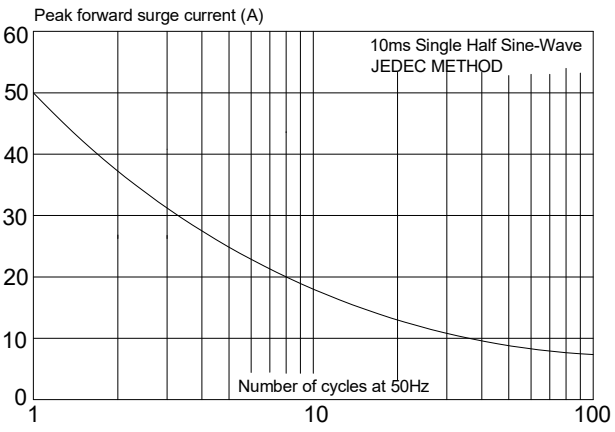
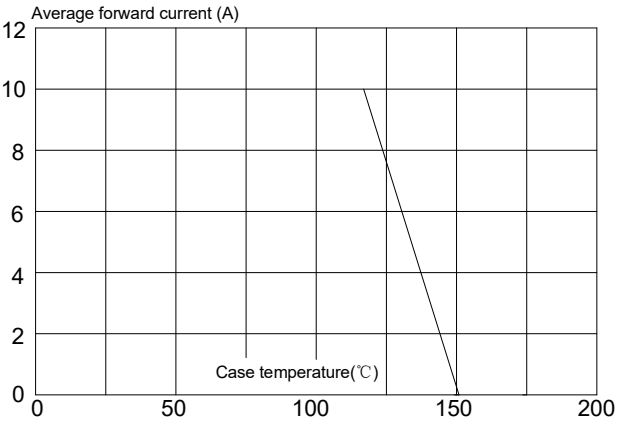


FIG.5: Forward current derating curve



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