



JEUR6003ZCT EPI ULTRAFAST RECOVERY RECTIFIER

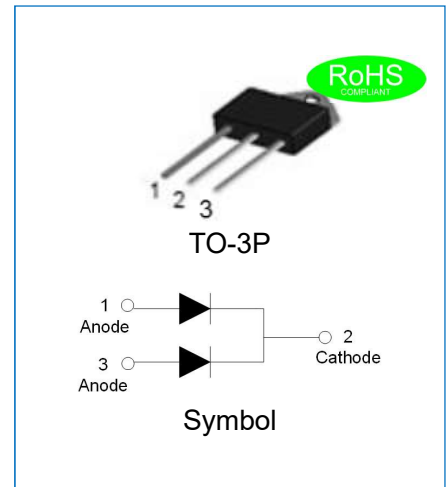
Rev.1.2

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
- ✧ Ultrafast recovery time and soft recovery characteristics
- ✧ Low recovery loss

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	JEUR6003ZCT	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	300	V
Maximum RMS voltage	V_{RMS}	210	V
Maximum DC blocking voltage	V_{DC}	300	V
Maximum average forward current at $\delta=0.5; T_{mb} \leq 105^{\circ}C$; square-wave pulse	$I_{F(AV)}$	60	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load (per diode)	I_{FSM}	330	A
Peak forward surge current: 10ms single half sine-wave superimposed on rated load (per diode)	I_{FSM}	300	A
Junction temperature and storage temperature range	T_j, T_{stg}	-55 to +150	$^{\circ}C$

ISOLATION CHARACTERISTICS

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
$V_{isol(RMS)}$	RMS isolation voltage	50Hz $\leq f \leq$ 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

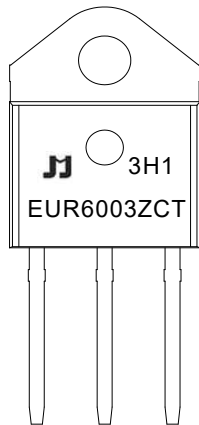
ELECTRICAL CHARACTERISTICS(Rating at 25°C case temperature unless otherwise specified.)

Parameter		Symbol	Min.	Typ.	Max.	Unit
Forward voltage	$I_F=30A, T_J=25^\circ C$	V_F	-	1.0	1.25	V
	$I_F=30A, T_J=150^\circ C$		-	0.85	1.0	
Reverse current at rated DC blocking voltage	$T_J=25^\circ C$	I_R	-	-	5	μA
	$T_J=150^\circ C$		-	-	400	
Reverse recovery time	$I_F=1A, V_R=30V,$ $dI_F/dt=50A/\mu s, T_J=25^\circ C$	t_{rr}	-	-	55	ns
	$I_F=30A, V_R=200V,$ $dI_F/dt=200A/\mu s, T_J=25^\circ C$		-	33	-	
	$I_F=30A, V_R=200V,$ $dI_F/dt=200A/\mu s, T_J=125^\circ C$		-	62	-	
Reverse recovery current	$I_F=30A, V_R=200V,$ $dI_F/dt=200A/\mu s, T_J=25^\circ C$	I_{RM}	-	5.3	-	A
	$I_F=30A, V_R=200V,$ $dI_F/dt=200A/\mu s, T_J=125^\circ C$		-	10.5	-	A
Recovered charge	$I_F=30A, V_R=200V,$ $dI_F/dt=200A/\mu s, T_J=25^\circ C$	Q_r	-	89	-	nC
	$I_F=30A, V_R=200V,$ $dI_F/dt=200A/\mu s, T_J=125^\circ C$		-	337	-	nC

THERMAL RESISTANCES

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-mb)}$	Thermal resistance from junction to mounting base with heatsink compound; per diode	-	0.8	2.0	$^\circ C/W$
	Thermal resistance from junction to mounting base with heatsink compound; both diodes conducting	-	-	1.2	$^\circ C/W$
$R_{th(j-a)}$	Thermal resistance from junction to ambient	-	45	-	$^\circ C/W$

MARKING



EUR	EPI Ultrafast Recovery Rectifier
60	$I_{F(AV)}=60A$
03	$V_{RRM}:300V$
Z	Package:TO-3P
CT	Common cathode

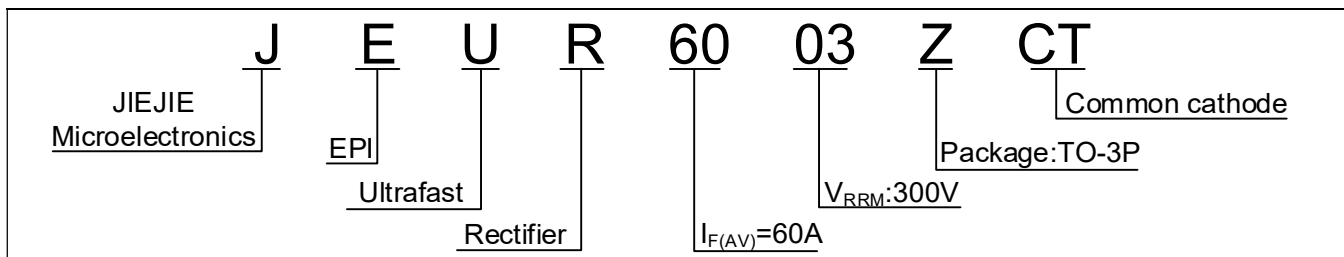
xH1: Month, 1、2、3 ~ 9、A、B、C

3x1:

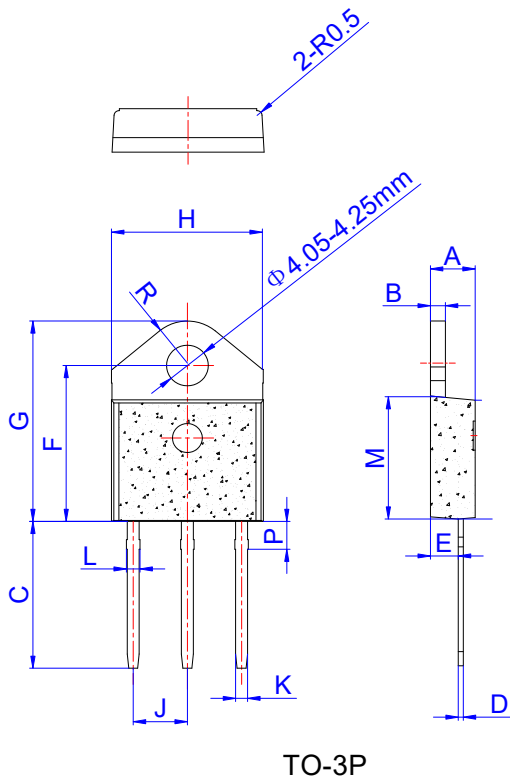
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

3Hx: Batch number

ORDERING INFORMATION



PACKAGE MECHANICAL DATA



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

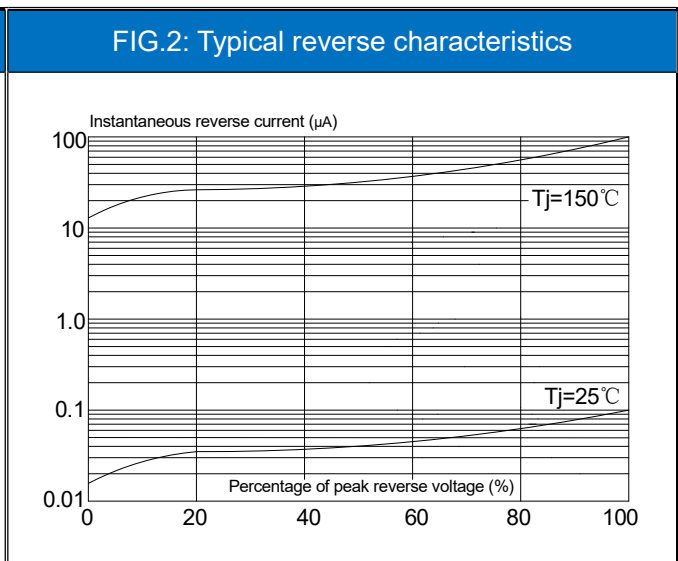
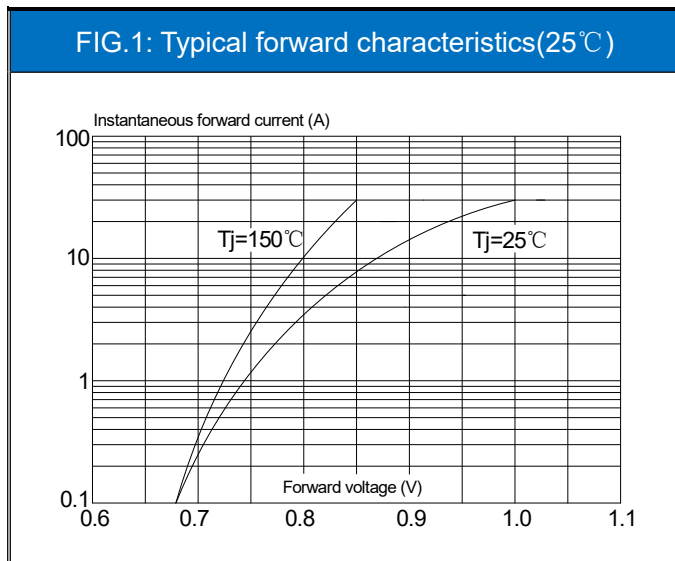


FIG.3: Maximum non-repetitive peak forward surge current(10ms single half sine-wave)

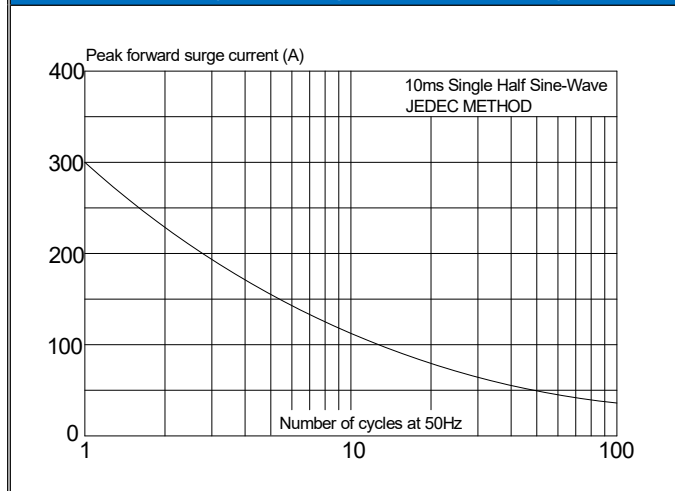


FIG.4: Maximum non-repetitive peak forward surge current(8.3ms single half sine-wave)

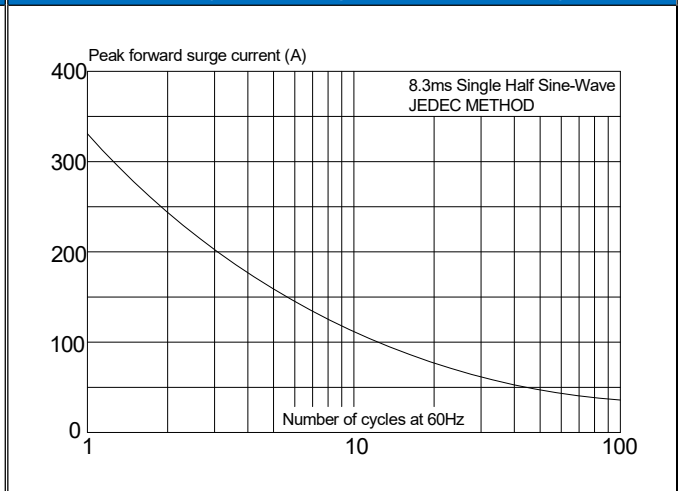


FIG.5: Forward current derating curve

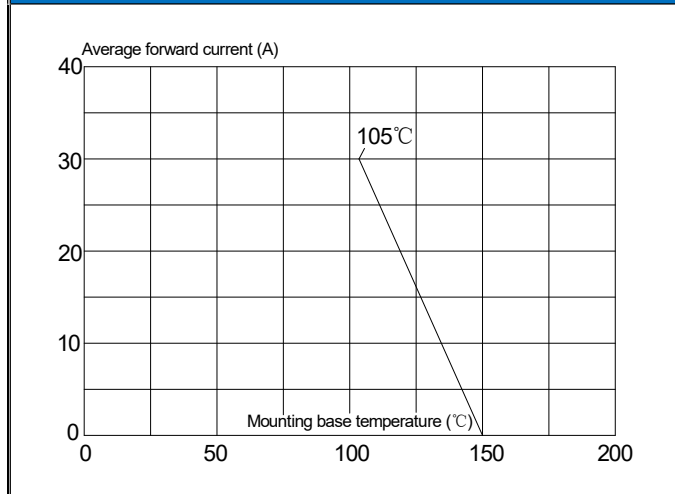
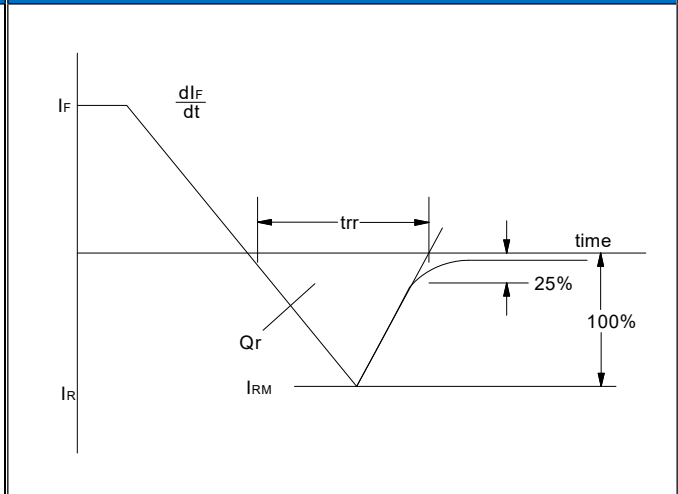


FIG.6: Reverse recovery definitions




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