

JEUR6003SCT EPI ULTRA FAST SOFT RECOVERY RECTIFIER

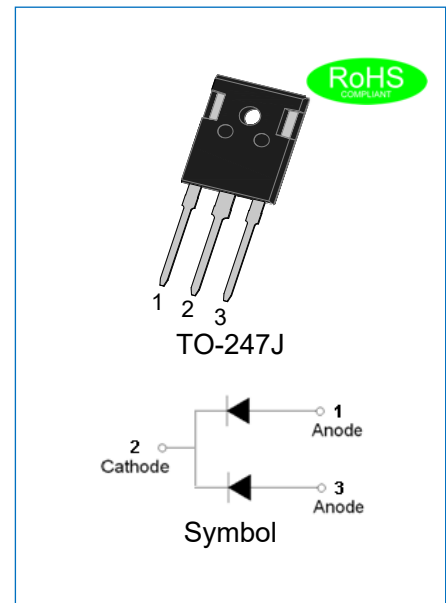
Rev.2.1

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
- ✧ Ultra fast recovery time and soft recovery characteristics
- ✧ Low recovery loss
- ✧ Applications for telecom power supplies, welding machines, secondary rectification in SMPS.

MECHANICAL DATA

- ✧ Case: TO-247J molded plastic over passivated junction
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Weight:6gram



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

Parameter	Symbol	JEUR6003SCT	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
Average forward current at $T_{mb} \leq 103^{\circ}C$	$I_{F(AV)}$	60	A
Peak forward surge current: 10ms single half sine-wave superimposed on rated load, per diode	I_{FSM}	300	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load, per diode	I_{FSM}	330	A
Junction temperature and storage temperature range	T_j, T_{stg}	-55 to +150	$^{\circ}C$

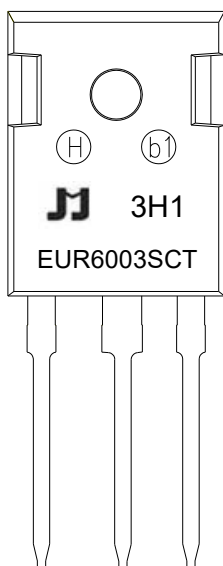
ELECTRICAL CHARACTERISTICS (Rating at 25°C ambient temperature unless otherwise specified.)

Parameter		Symbol	Min.	Typ.	Max.	Unit
Forward voltage @ $I_F=30A$	$T_J=25^{\circ}C$	V_F	-	1.00	1.25	V
	$T_J=150^{\circ}C$		-	0.85	1.00	
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	$I_F=1A, V_R=30V,$ $di/dt=50A/\mu s, T_J=25^{\circ}C$	t_{rr}	-	-	50	ns
	$I_F=30A, V_R=200V,$ $di/dt=200A/\mu s, T_J=25^{\circ}C$		-	33	-	
	$I_F=30A, V_R=200V,$ $di/dt=200A/\mu s, T_J=125^{\circ}C$		-	62	-	
Peak reverse recovery current	$I_F=30A, V_R=200V,$ $di/dt=200A/\mu s, T_J=25^{\circ}C$	I_{RM}	-	5.3	-	A
	$I_F=30A, V_R=200V,$ $di/dt=200A/\mu s, T_J=125^{\circ}C$		-	10.8	-	
Recovered charge	$I_F=30A, V_R=200V,$ $di/dt=200A/\mu s, T_J=25^{\circ}C$	Q_r	-	89	-	nC
	$I_F=30A, V_R=200V,$ $di/dt=200A/\mu s, T_J=125^{\circ}C$		-	407	-	

THERMAL RESISTANCES

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-mb)}$	Thermal resistance from junction to mounting base, per diode	-	0.8	2	$^{\circ}C/W$
	Thermal resistance from junction to mounting base, both diodes conducting	-	-	1.2	
$R_{th(j-a)}$	Thermal resistance from junction to ambient	-	45	-	$^{\circ}C/W$

MARKING



EUR	EPI Ultrafast Recovery Rectifier
60	$I_{F(AV)}=60A$
03	$V_{RRM}:300V$
S	Package:TO-247J
CT	Common cathode

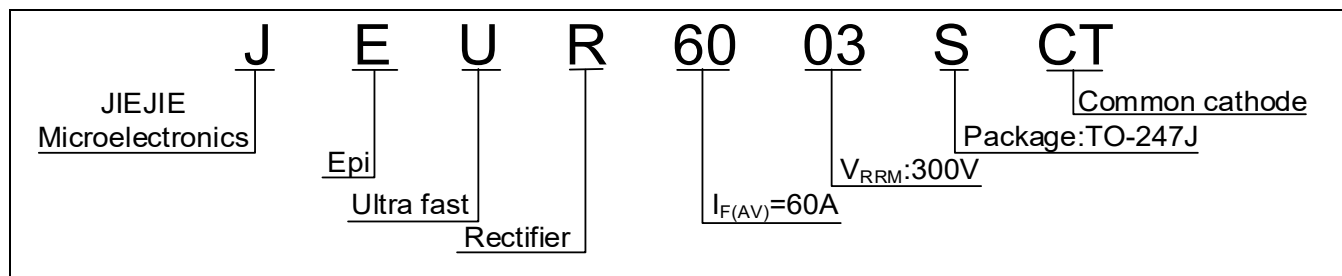
$\underline{x}H1$: Month, 1/2/3~9/A/B/C

$3\underline{x}1$:

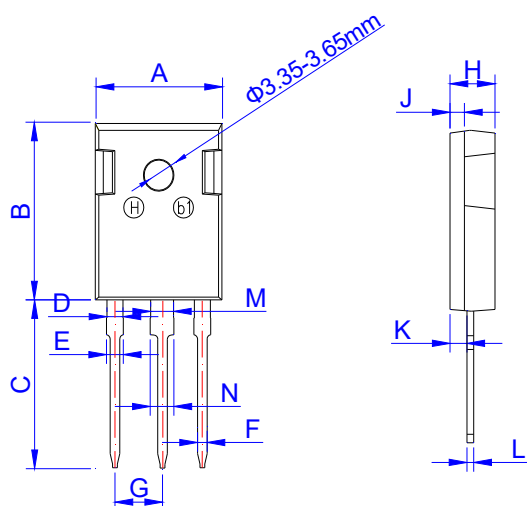
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

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

ORDERING INFORMATION



PACKAGE MECHANICAL DATA



TO-247J

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	15.50	15.80	16.10	0.610	0.622	0.634
B	20.80	21.00	21.20	0.819	0.827	0.835
C	19.70	20.00	20.30	0.776	0.787	0.799
D	1.80	2.00	2.20	0.071	0.079	0.087
E	1.90	2.10	2.30	0.075	0.083	0.091
F	1.00	1.20	1.40	0.039	0.047	0.055
G	5.25		5.65	0.207		0.222
H	4.80	5.00	5.20	0.189	0.197	0.205
J	1.90	2.00	2.10	0.075	0.079	0.083
K	2.20	2.35	2.50	0.087	0.093	0.098
L	0.41	0.60	0.79	0.016	0.024	0.031
M	2.80	3.00	3.20	0.110	0.118	0.126
N	2.90	3.10	3.30	0.114	0.122	0.130

PACKAGE INFORMATION-TO-247J

OUTLINE	UNIT WEIGHT (g/PCS) TYP	TUBE (PCS)	PER CARTON (PCS)
TUBE	6	30	2,250

CHARACTERISTICS CURVE

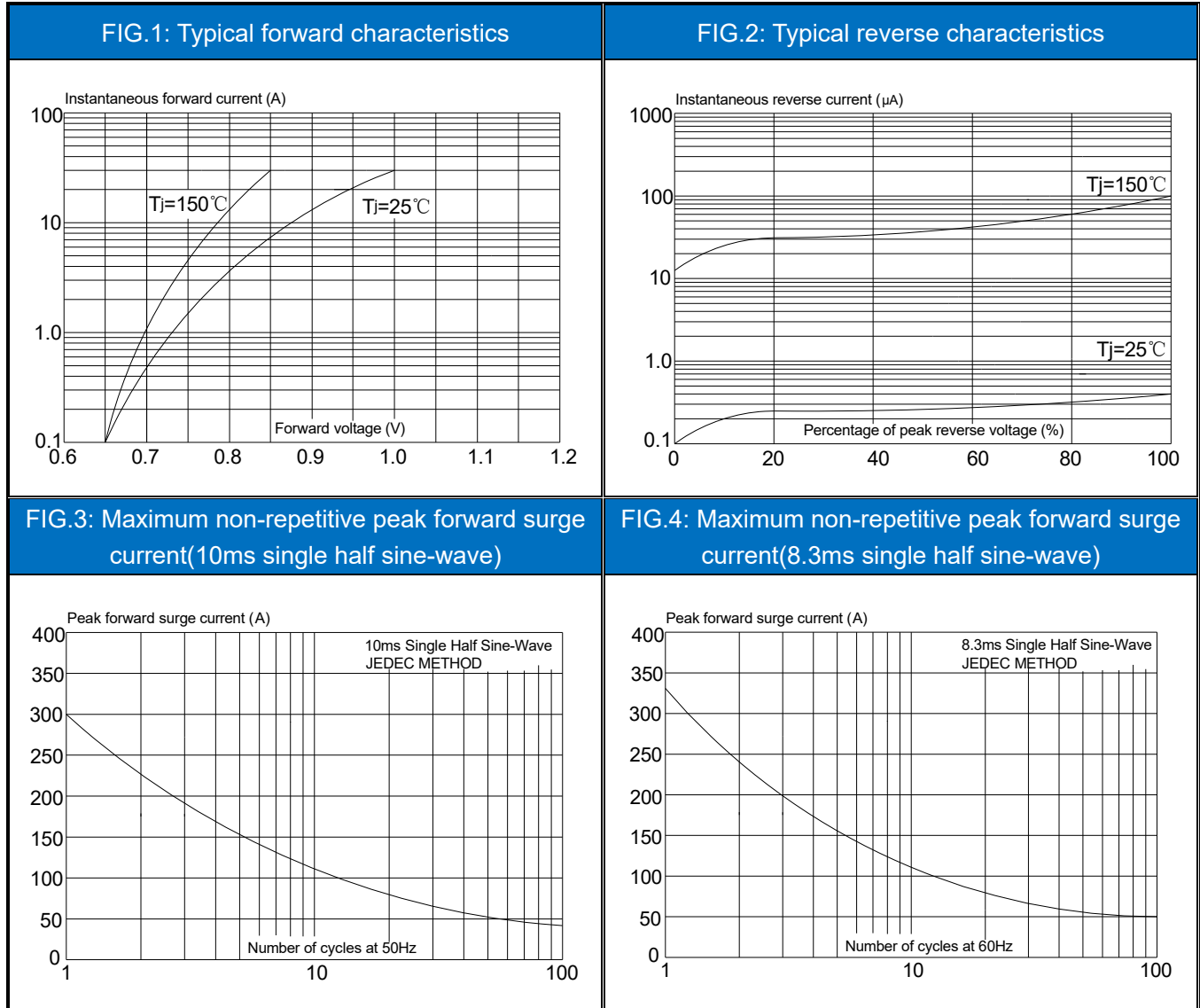


FIG.5: Forward current derating curve

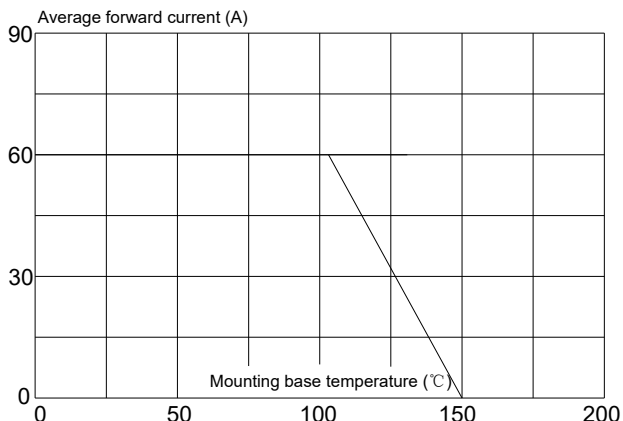


FIG.6: Reverse recovery definitions

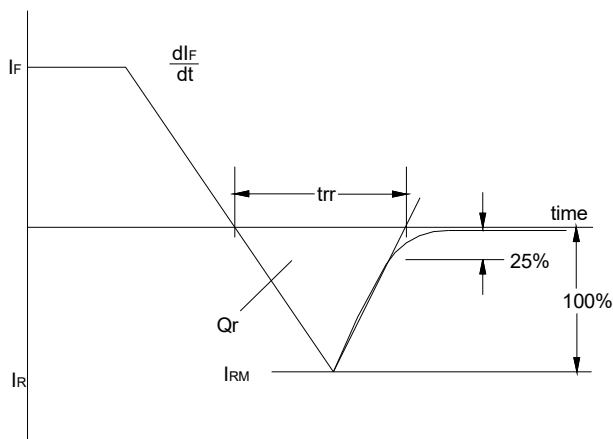


FIG.7: Forward power dissipation vs. average forward current (square waveform)

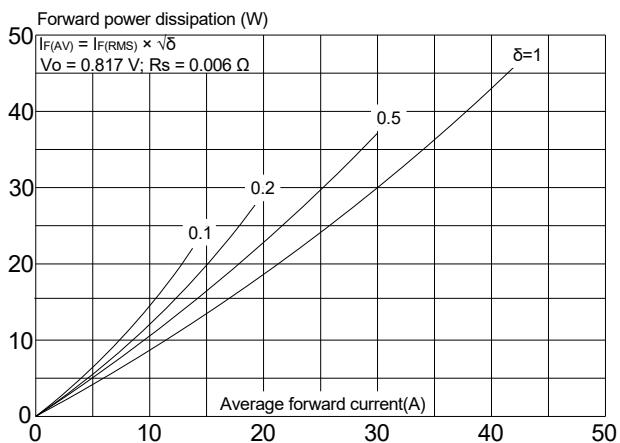
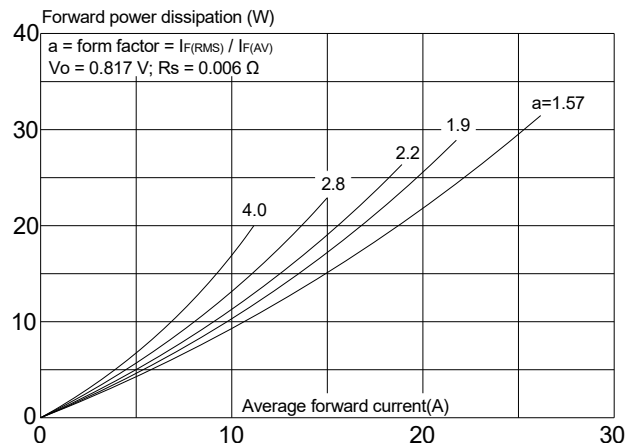


FIG.8: Forward power dissipation vs. average forward current (sinusoidal waveform)




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