



## JEUR6004SL

### EPI ULTRAFAST RECOVERY RECTIFIER

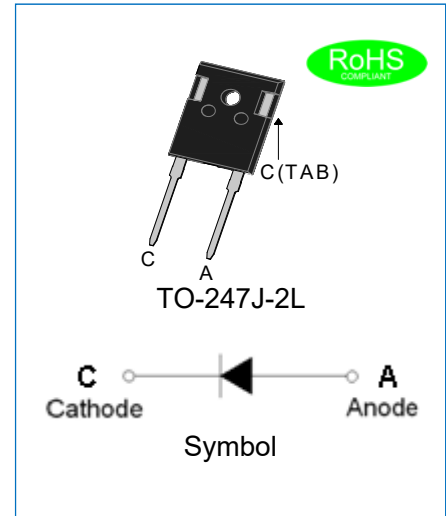
Rev.1.5

#### 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-247J-2L molded plastic
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Weight:5.75gram



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

| Parameter  | Symbol         | JEUR6004SL  | Unit        |
|--|----------------|-------------|-------------|
| Maximum repetitive peak reverse voltage  | $V_{RRM}$      | 400         | V           |
| Maximum RMS voltage  | $V_{RMS}$      | 280         | V           |
| Maximum DC blocking voltage  | $V_{DC}$       | 400         | V           |
| Average forward current at $T_{mb}=125^{\circ}C$                                   | $I_{F(AV)}$    | 60          | A           |
| Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$      | 600         | A           |
| Junction temperature and storage temperature range                                 | $T_j, T_{stg}$ | -55 to +150 | $^{\circ}C$ |

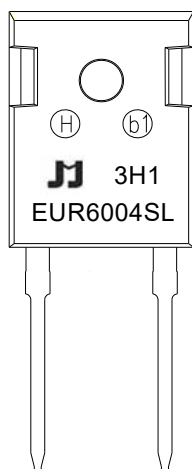
**ELECTRICAL CHARACTERISTICS**(Rating at 25°C ambient temperature unless otherwise specified.)

| Parameter             |   | Symbol   | Min. | Typ. | Max. | Unit    |
|-----------------------|---|----------|------|------|------|---------|
| Forward voltage       | $I_F=60A, T_j=25^\circ C$                           | $V_F$    | -    | 1.15 | 1.45 | V       |
|                       | $I_F=60A, T_j=150^\circ C$                          |          | -    | 0.95 | 1.35 |         |
| Reverse current       | $V_R=400V, T_j=25^\circ C$                          | $I_R$    | -    | -    | 5    | $\mu A$ |
|                       | $V_R=400V, T_j=150^\circ C$                         |          | -    | -    | 500  |         |
| Reverse recovery time | $I_F=0.5A, I_R=1A, I_{rr}=0.25A$                    | $t_{rr}$ | -    | 55   | 75   | ns      |
|                       | $I_F=1A, V_R=30V, di/dt=200A/\mu s, T_j=25^\circ C$ |          | -    | 29   | 45   |         |

**THERMAL RESISTANCES**

| Symbol         | Parameter   | Min. | Typ. | Max. | Unit         |
|----------------|---|------|------|------|--------------|
| $R_{th(j-a)}$  | Thermal resistance from junction to ambient       | -    | 40   | -    | $^\circ C/W$ |
| $R_{th(j-mb)}$ | Thermal resistance from junction to mounting base | -    | -    | 1    | $^\circ C/W$ |

**MARKING**



|     |                                  |
|-----|----------------------------------|
| EUR | EPI Ultrafast Recovery Rectifier |
| 60  | $I_{F(AV)}=60A$                  |
| 04  | $V_{RRM}:400V$                   |
| SL  | Package:TO-247J-2L               |

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

$3\underline{x}1$ :

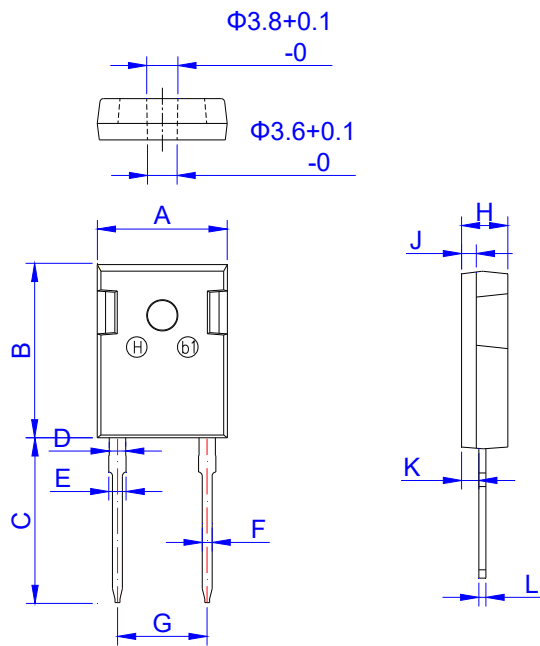
|      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|
| 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| H    | I    | J    | K    | L    | M    | N    |
| 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | ...  |
| O    | P    | Q    | R    | S    | T    | ...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

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

**ORDERING INFORMATION**

|  |  |                                  |                 |  |   |   |
|--|--|----------------------------------|-----------------|--|---|---|
| <p><b>J</b></p> <p>JIEJIE<br/>Microelectronics</p> | <p><b>E</b></p> <p>EPI<br/>Ultrafast</p> | <p><b>U</b></p> <p>Rectifier</p> | <p><b>R</b></p> | <p><b>60</b></p> <p><math>I_{F(AV)}=60A</math></p> | <p><b>04</b></p> <p><math>V_{RRM}:400V</math></p> | <p><b>SL</b></p> <p>Package:<br/>TO-247J-2L</p> |
|--|--|----------------------------------|-----------------|--|---|---|

**PACKAGE MECHANICAL DATA**



TO-247J-2L

| 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    | 10.50       |       | 11.30 | 0.413  |       | 0.445 |
| 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 |

**PACKAGE INFORMATION-TO-247J-2L**

| OUTLINE | UNIT WEIGHT<br>(g/PCS) TYP | TUBE<br>(PCS) | PER CARTON<br>(PCS) |
|---------|----------------------------|---------------|---------------------|
| TUBE    | 5.75                       | 30            | 2,250               |

CHARACTERISTICS CURVE

FIG.1: Typical forward characteristics

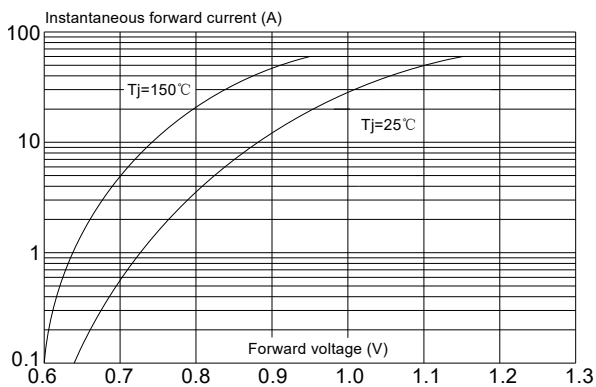


FIG.2: Typical reverse characteristics

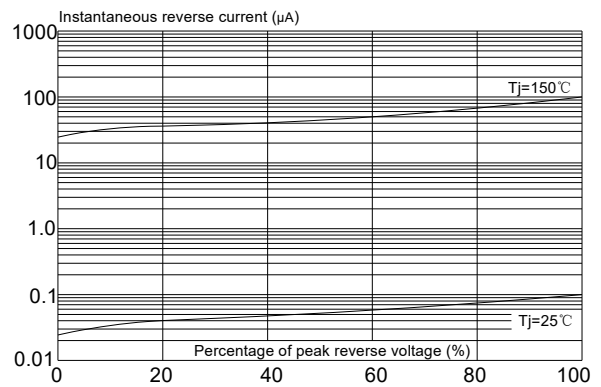


FIG.3: Maximum non-repetitive peak forward surge current(8.3ms single half sine-wave)

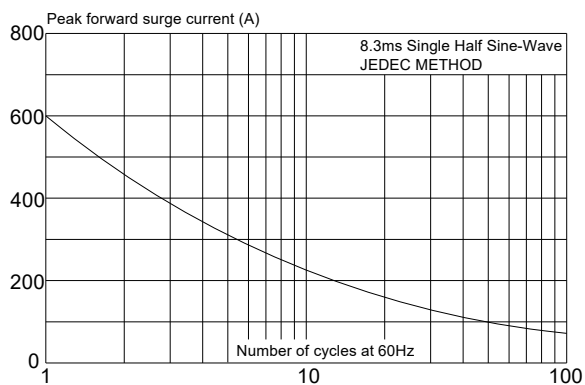
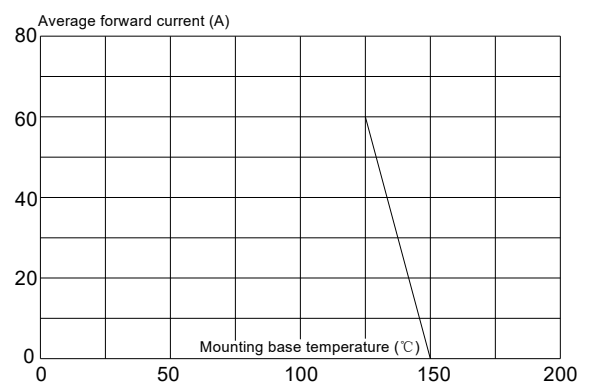


FIG.4: Forward current derating curve




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