

**JEER6006SCT**  
**EPI SUPERFAST SOFT RECOVERY RECTIFIER**

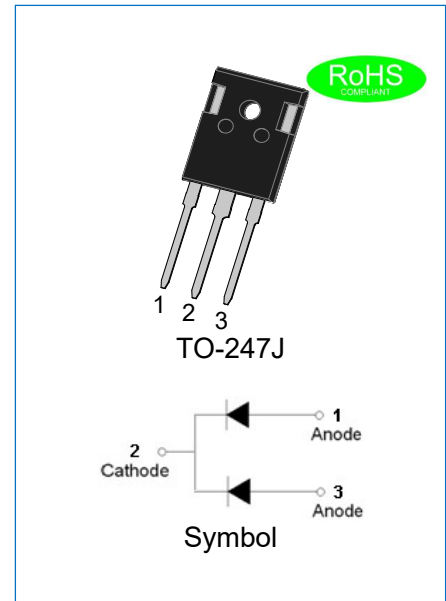
Rev.1.6

**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
- ✧ Superfast recovery time and soft recovery characteristics
- ✧ Low recovery loss
- ✧ Applications for Interleaved PFC topology in switched-mode power supplies, active PFC in air conditioner

**MECHANICAL DATA**

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


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

| Parameter  | Symbol         | JEER6006SCT | Unit |
|--|----------------|-------------|------|
| Maximum repetitive peak reverse voltage  | $V_{RRM}$      | 600         | V    |
| Maximum RMS voltage  | $V_{RMS}$      | 420         | V    |
| Maximum DC blocking voltage  | $V_{DC}$       | 600         | V    |
| Average forward current at $T_{mb} \leq 105^{\circ}C$  | $I_{F(AV)}$    | 60          | A    |
| Peak forward surge current: 10ms single half sine-wave superimposed on rated load (per diode)  | $I_{FSM}$      | 180         | A    |
| Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load (per diode) |                | 200         |      |
| Junction temperature and storage temperature range   | $T_j, T_{stg}$ | -55 to +150 | °C   |

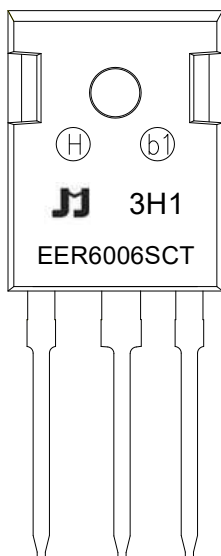
**ELECTRICAL CHARACTERISTICS**(Rating at 25°C ambient temperature unless otherwise specified.)

| Parameter                                    |   | Symbol   | Min. | Typ. | Max. | Unit    |
|--|---|----------|------|------|------|---------|
| Forward voltage @ $I_F=30A$                  | $T_j=25^\circ C$  | $V_F$    | -    | 1.65 | 2.0  | V       |
|  | $T_j=150^\circ C$   |          | -    | 1.35 | -    |         |
| Reverse current at rated DC blocking voltage | $T_j=25^\circ C$  | $I_R$    | -    | -    | 5    | $\mu A$ |
|  | $T_j=150^\circ C$   |          | -    | -    | 400  |         |
| Reverse recovery time                        | $I_F=30A, V_R=30V,$<br>$di/dt=200A/\mu s, T_j=25^\circ C$   | $t_{rr}$ | -    | 41   | 90   | ns      |
|  | $I_F=30A, V_R=200V,$<br>$di/dt=200A/\mu s, T_j=25^\circ C$  |          | -    | 51   | -    |         |
|  | $I_F=30A, V_R=200V,$<br>$di/dt=200A/\mu s, T_j=125^\circ C$ |          | -    | 90   | -    |         |
| Peak reverse recovery current                | $I_F=30A, V_R=200V,$<br>$di/dt=200A/\mu s, T_j=25^\circ C$  | $I_{RM}$ | -    | 5.5  | -    | A       |
|  | $I_F=30A, V_R=200V,$<br>$di/dt=200A/\mu s, T_j=125^\circ C$ |          | -    | 12.5 | -    |         |
| Recovered charge                             | $I_F=30A, V_R=200V,$<br>$di/dt=200A/\mu s, T_j=25^\circ C$  | $Q_r$    | -    | 160  | -    | nC      |
|  | $I_F=30A, V_R=200V,$<br>$di/dt=200A/\mu s, T_j=125^\circ C$ |          | -    | 580  | -    |         |

**THERMAL RESISTANCES**

| Symbol         | Parameter   | Min. | Typ. | Max. | Unit         |
|----------------|---|------|------|------|--------------|
| $R_{th(j-mb)}$ | Thermal resistance from junction to mounting base, per diode              | -    | 1.17 | 1.5  | $^\circ C/W$ |
|                | Thermal resistance from junction to mounting base, both diodes conducting | -    | 0.61 | 0.75 |              |
| $R_{th(j-a)}$  | Thermal resistance from junction to ambient                               | -    | 40   | -    | $^\circ C/W$ |

## MARKING



|     |                                  |
|-----|----------------------------------|
| EER | EPI Superfast Recovery Rectifier |
| 60  | $I_{F(AV)}=60A$                  |
| 06  | $V_{RRM}:600V$                   |
| S   | Package:TO-247J                  |
| CT  | Common cathode                   |

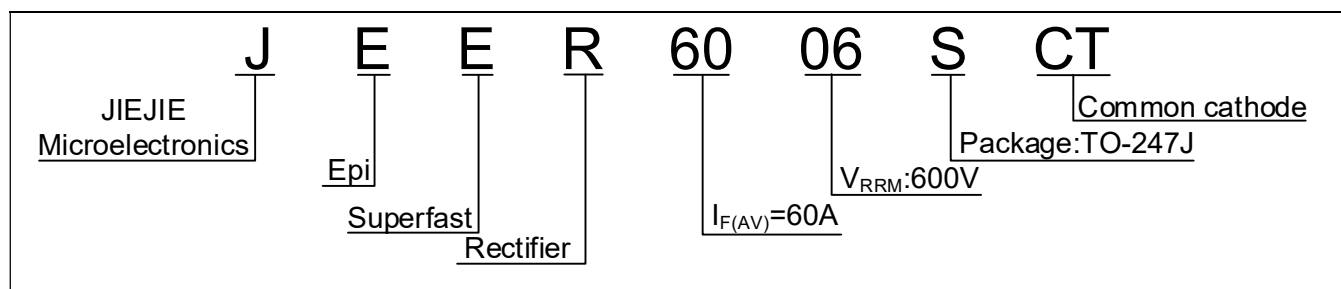
**xH1:** Month, 1/2/3~9/A/B/C

**3x1:**

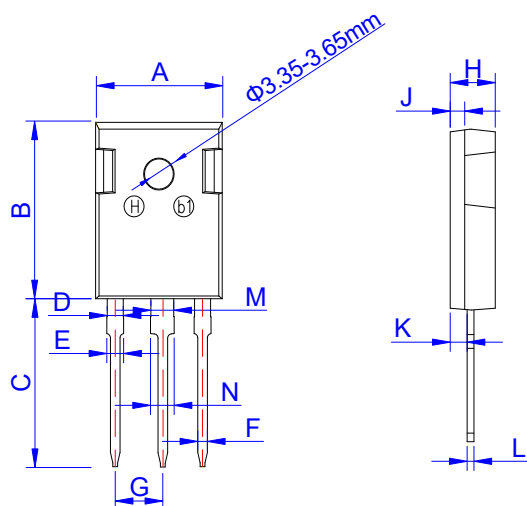
|      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|
| 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| H    | I    | J    | K    | L    | M    | N    |
| 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | ...  |
| O    | P    | Q    | R    | S    | T    | ...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

**3Hx:** Batch number

## ORDERING INFORMATION



## PACKAGE MECHANICAL DATA



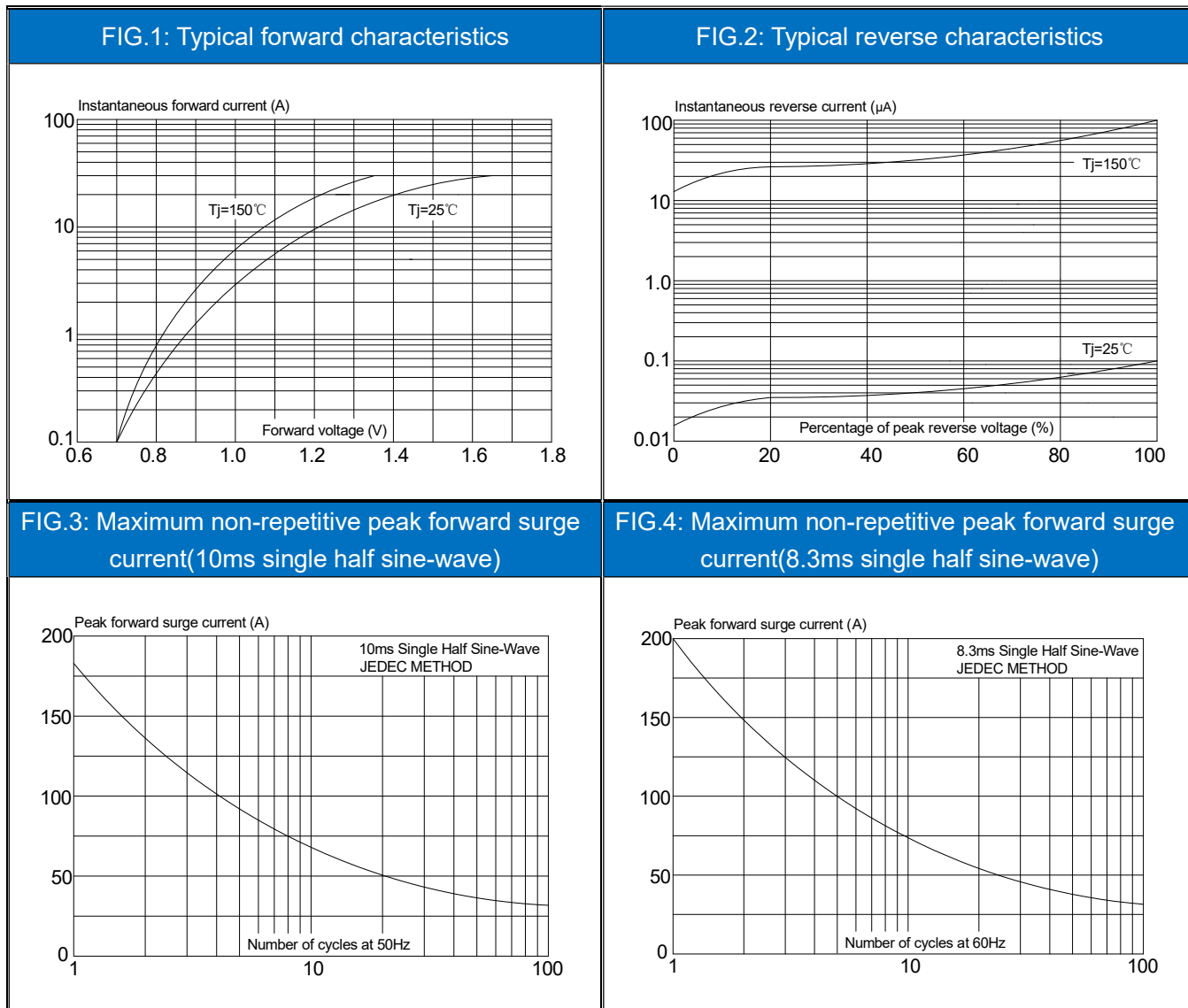
TO-247J

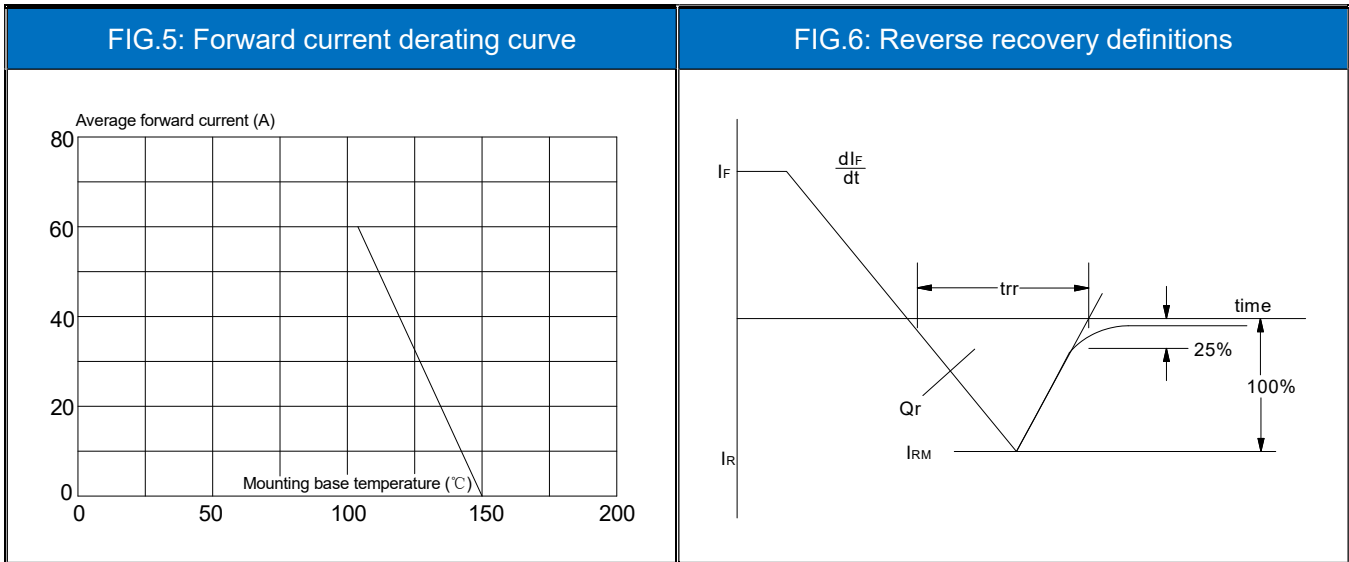
| Ref. | Dimensions  |       |       |        |       |       |
|------|-------------|-------|-------|--------|-------|-------|
|      | Millimeters |       |       | Inches |       |       |
|      | Min.        | Typ.  | Max.  | Min.   | Typ.  | Max.  |
| A    | 15.50       | 15.80 | 16.10 | 0.610  | 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**






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