

**JEER4006ZCT****EPI SUPERFAST SOFT RECOVERY RECTIFIER**

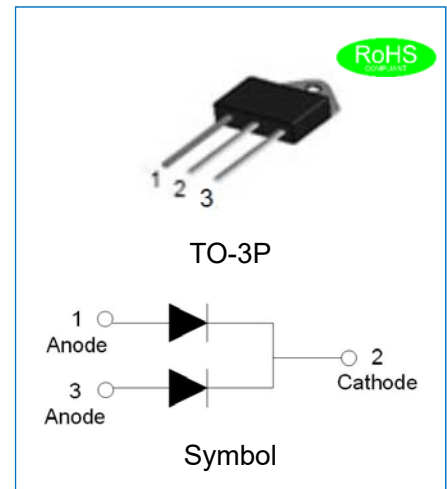
Rev.1.2

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
- ✧ Superfast 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 | JEER4006ZCT | Unit |
|---|----------------|-------------|--------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 600 | V |
| Maximum DC blocking voltage | V_{DC} | 600 | V |
| Average forward current at $T_C=100^{\circ}\text{C}$ | $I_{F(AV)}$ | 40 | A |
| Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load(per diode) | I_{FSM} | 200 | A |
| Junction temperature and storage temperature range | T_J, T_{stg} | -55 to +150 | $^{\circ}\text{C}$ |

ISOLATION CHARACTERISTICS

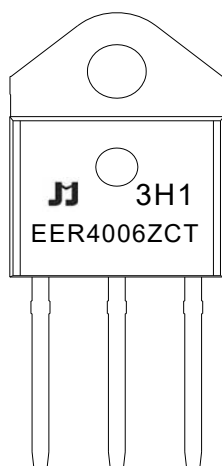
| Symbol | Parameter | Conditions | Min. | Typ. | Max. | Unit |
|-----------------|-----------------------|--|------|------|------|------|
| $V_{isol(RMS)}$ | RMS isolation voltage | 50Hz \leq f \leq 60Hz;RH \leq 65%;from all pins to external heatsink; sinusoidal waveform; clean and dust free | - | - | 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 | $I_F=20A, T_J=25^{\circ}C$ | V_F | - | - | 1.7 | V |
| Reverse current | $V_R=600V, T_J=25^{\circ}C$ | I_R | - | - | 5 | μA |
| | $V_R=600V, T_J=150^{\circ}C$ | | - | - | 300 | |
| Maximum reverse recovery time | $I_F=0.5A, I_R=1.0A,$ $I_{RR}=0.25A$ | t_{rr} | - | - | 35 | ns |

THERMAL RESISTANCES

| Symbol | Parameter | Min. | Typ. | Max. | Unit |
|---------------|--|------|------|------|---------------|
| $R_{th(j-c)}$ | Thermal resistance from junction to case | - | 2 | - | $^{\circ}C/W$ |

MARKING

| | |
|-----|----------------------------------|
| EER | EPI Superfast Recovery Rectifier |
| 40 | $I_{F(AV)}=40A$ |
| 06 | $V_{RRM}: 600V$ |
| Z | Package: TO-3P |
| CT | Common cathode |

3H1: Month, 1、2、3 ~ 9、A、B、C

3x1:

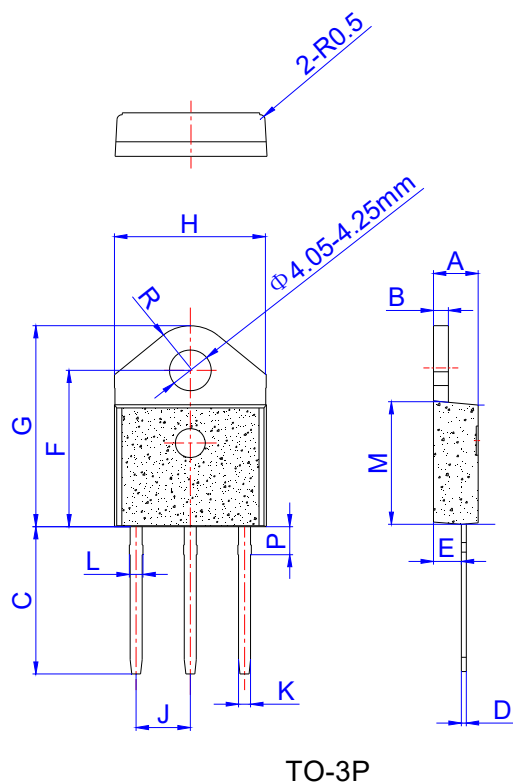
| | | | | | | |
|------|------|------|------|------|------|------|
| 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| H | I | J | K | L | M | N |
| 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | ... |
| O | P | Q | R | S | T | ... |

3Hx: Batch number

ORDERING INFORMATION

| | | | | | | | |
|----------------------------|-----|-----------|-----------|-----------------|----------------|---------------|----------------|
| J | E | E | R | 40 | 06 | Z | CT |
| JieJie Microelectronics | Epi | Superfast | Rectifier | $I_{F(AV)}=40A$ | $V_{RRM}:600V$ | Package:TO-3P | Common cathode |

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.1: Typical forward characteristics (25°C)

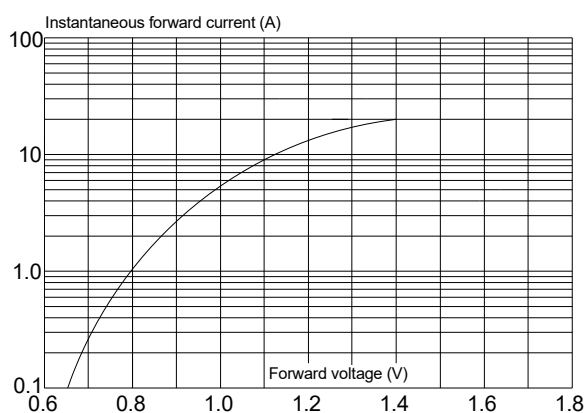


FIG.2: Typical reverse characteristics

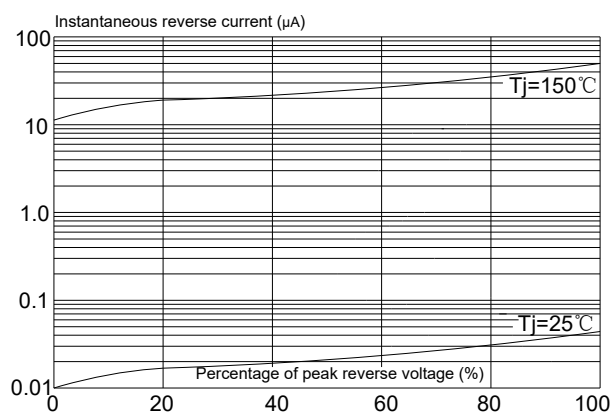


FIG.3: Maximum non-repetitive peak forward surge current

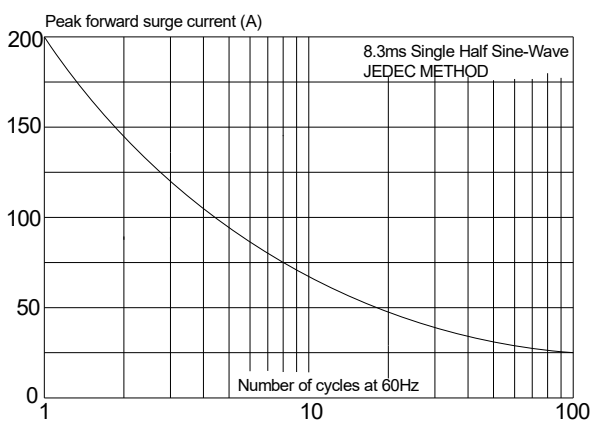
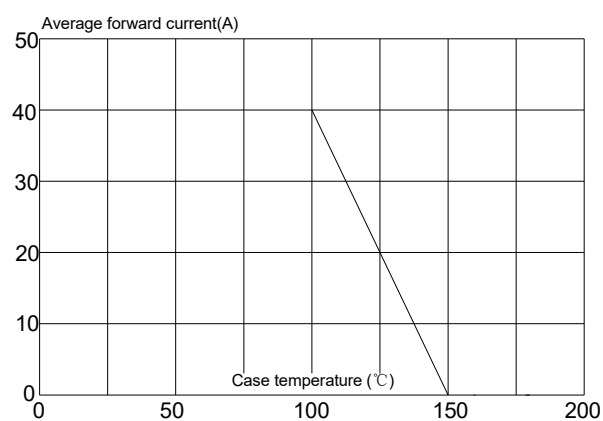


FIG.4: Forward current derating curve



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