



## JEER1506K

### EPI SUPERFAST RECOVERY RECTIFIER

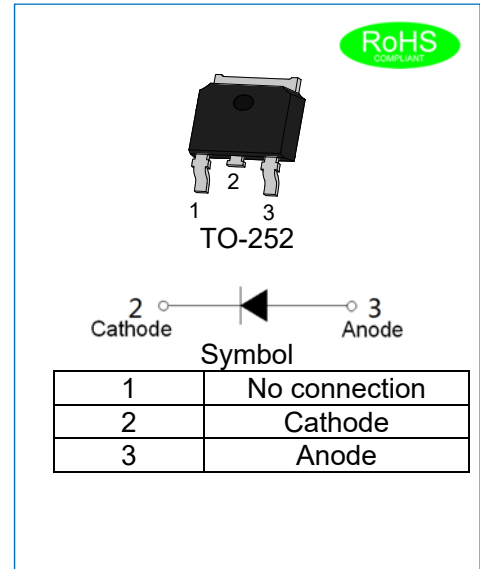
Rev.1.5

#### 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
- ✧ Superfast recovery time and soft recovery characteristics
- ✧ Low recovery loss
- ✧ Applications for discontinuous current mode (DCM) power factor correction (PFC)

#### MECHANICAL DATA

- ✧ Case: TO-252 molded plastic
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Weight: 0.329 gram



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

| Parameter                                                                         | Symbol         | JEER1506K   | Unit               |
|-----------------------------------------------------------------------------------|----------------|-------------|--------------------|
| Maximum repetitive peak reverse voltage                                           | $V_{RRM}$      | 600         | V                  |
| Maximum DC blocking voltage                                                       | $V_{DC}$       | 600         | V                  |
| Average forward rectified current at $T_C=100^{\circ}\text{C}$                    | $I_{F(AV)}$    | 15          | A                  |
| Peak forward surge current:8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$      | 200         | A                  |
| Junction temperature and storage temperature range                                | $T_J, T_{stg}$ | -55 to +150 | $^{\circ}\text{C}$ |

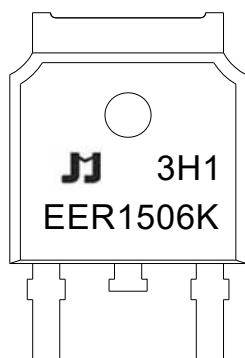
#### ELECTRICAL CHARACTERISTICS(Rating at 25°C ambient temperature unless otherwise specified.)

| Parameter             |                                                                  | Symbol          | Min. | Typ. | Max. | Unit |
|-----------------------|------------------------------------------------------------------|-----------------|------|------|------|------|
| Forward voltage       | I <sub>F</sub> =15A, T <sub>j</sub> =25℃                         | V <sub>F</sub>  | -    | -    | 1.7  | V    |
| Reverse current       | V <sub>R</sub> =600V, T <sub>j</sub> =25℃                        | I <sub>R</sub>  | -    | -    | 5    | μA   |
|                       | V <sub>R</sub> =600V, T <sub>j</sub> =150℃                       |                 | -    | -    | 300  |      |
| Reverse recovery time | I <sub>F</sub> =0.5A, I <sub>R</sub> =1A, I <sub>rr</sub> =0.25A | t <sub>rr</sub> | -    | -    | 35   | ns   |

## THERMAL RESISTANCES

| Symbol        | Parameter                                | Min. | Typ. | Max. | Unit |
|---------------|------------------------------------------|------|------|------|------|
| $R_{th(j-c)}$ | Thermal resistance from junction to case | -    | -    | 14   | °C/W |

## MARKING



|     |                                  |
|-----|----------------------------------|
| EER | EPI Superfast Recovery Rectifier |
| 15  | $I_{F(AV)}=15A$                  |
| 06  | $V_{RRM}:600V$                   |
| K   | Package: TO-252                  |

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

3x1:

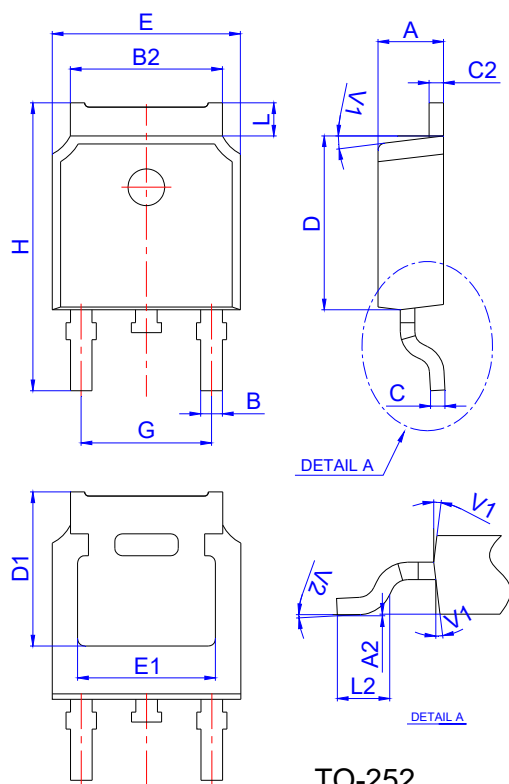
|      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|
| 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| H    | I    | J    | K    | L    | M    | N    |
| 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | ...  |
| O    | P    | Q    | R    | S    | T    | ...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

3Hx: Batch number

## ORDERING INFORMATION

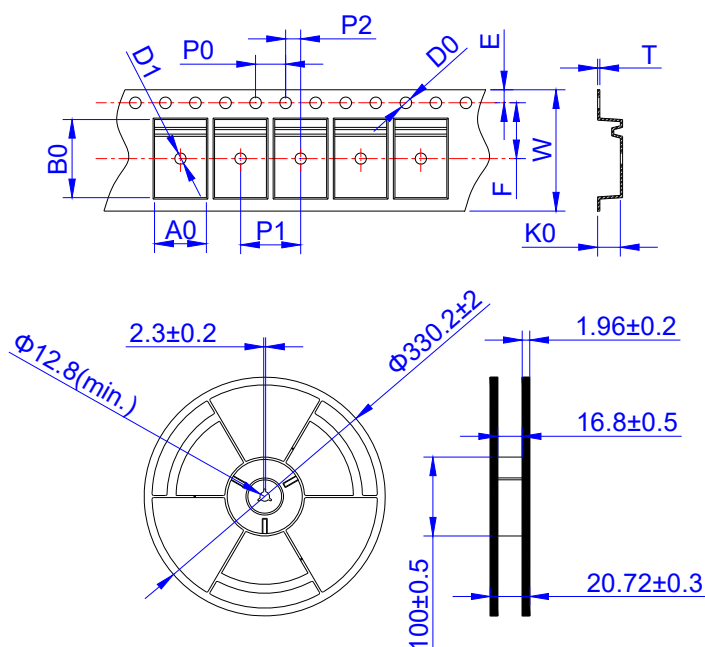
|                            |   |           |           |   |                 |                |   |                |
|----------------------------|---|-----------|-----------|---|-----------------|----------------|---|----------------|
| JieJie<br>Microelectronics | J | E         | E         | R | 15              | 06             | K | Package:TO-252 |
|                            |   | EPI       |           |   |                 |                |   |                |
|                            |   | Superfast |           |   |                 |                |   |                |
|                            |   |           | Rectifier |   | $I_{F(AV)}=15A$ | $V_{RRM}:600V$ |   |                |

## PACKAGE MECHANICAL DATA



| Ref. | Dimensions  |      |       |          |      |       |
|------|-------------|------|-------|----------|------|-------|
|      | Millimeters |      |       | Inches   |      |       |
|      | Min.        | Typ. | Max.  | Min.     | Typ. | Max.  |
| A    | 2.10        |      | 2.50  | 0.083    |      | 0.098 |
| A2   | 0           |      | 0.15  | 0        |      | 0.006 |
| B    | 0.66        |      | 0.86  | 0.026    |      | 0.034 |
| B2   | 5.18        |      | 5.48  | 0.202    |      | 0.216 |
| C    | 0.40        |      | 0.60  | 0.016    |      | 0.024 |
| C2   | 0.44        |      | 0.58  | 0.017    |      | 0.023 |
| D    | 5.90        |      | 6.30  | 0.232    |      | 0.248 |
| D1   | 5.30REF     |      |       | 0.209REF |      |       |
| E    | 6.40        |      | 6.80  | 0.252    |      | 0.268 |
| E1   | 4.63        |      |       | 0.182    |      |       |
| G    | 4.47        |      | 4.67  | 0.176    |      | 0.184 |
| H    | 9.50        |      | 10.70 | 0.374    |      | 0.421 |
| L    | 0.95        |      | 1.30  | 0.037    |      | 0.051 |
| L2   | 1.35        |      | 1.65  | 0.053    |      | 0.065 |
| V1   |             | 7°   |       |          | 7°   |       |
| V2   | 0°          |      | 6°    | 0°       |      | 6°    |

## REEL SPECIFICATION -TO-252



| Ref. | Dimensions  |             |
|------|-------------|-------------|
|      | Millimeters | Inches      |
| W    | Max:16.3    | Max:0.642   |
| E    | 1.75±0.10   | 0.069±0.004 |
| F    | 7.50±0.10   | 0.295±0.004 |
| D0   | 1.55±0.05   | 0.061±0.002 |
| D1   | Min:1.50    | Min:0.059   |
| P0   | 4.00±0.10   | 0.157±0.004 |
| P1   | 8.00±0.10   | 0.315±0.004 |
| P2   | 2.00±0.10   | 0.079±0.004 |
| A0   | 6.90±0.10   | 0.272±0.004 |
| B0   | 10.50±0.10  | 0.413±0.004 |
| K0   | 2.70±0.10   | 0.106±0.004 |
| T    | 0.30±0.05   | 0.012±0.002 |

| OUTLINE | UNIT WEIGHT<br>(g/PCS) TYP | REEL<br>(PCS) | PER CARTON<br>(PCS) | TAPE & REEL |
|---------|----------------------------|---------------|---------------------|-------------|
| TAPING  | 0.329                      | 2,500         | 25,000              | 13inch      |

## CHARACTERISTICS CURVE

FIG.1: Typical forward characteristics

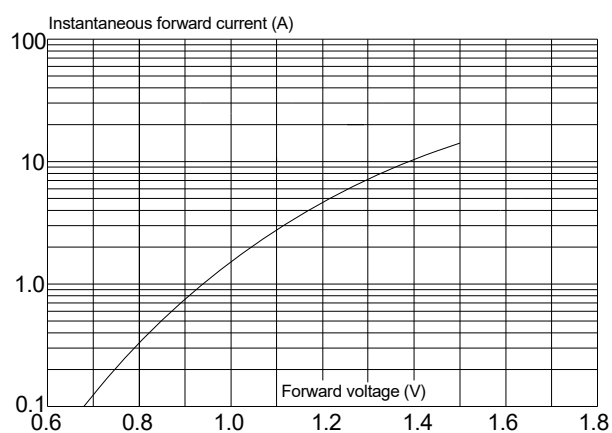


FIG.2: Typical reverse characteristics

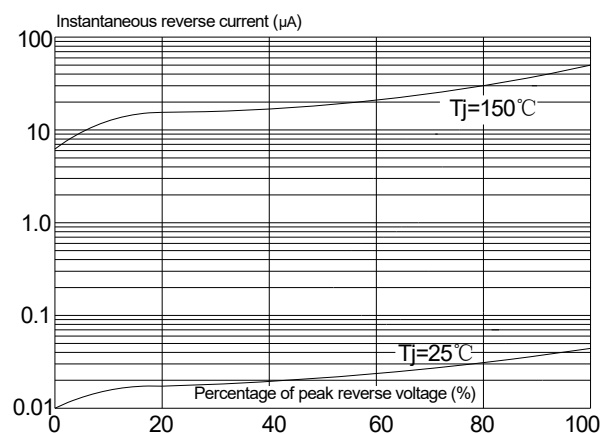


FIG.3: Maximum non-repetitive peak forward surge current

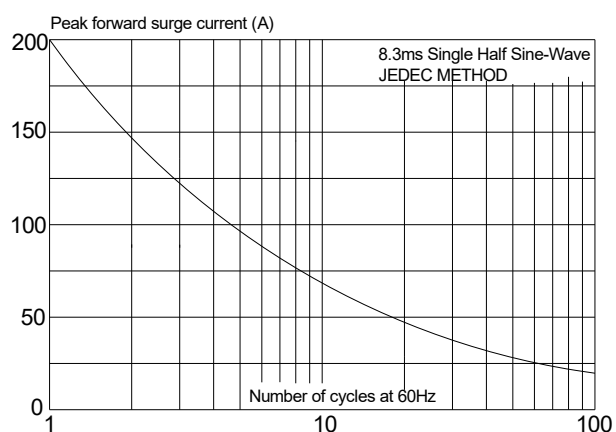
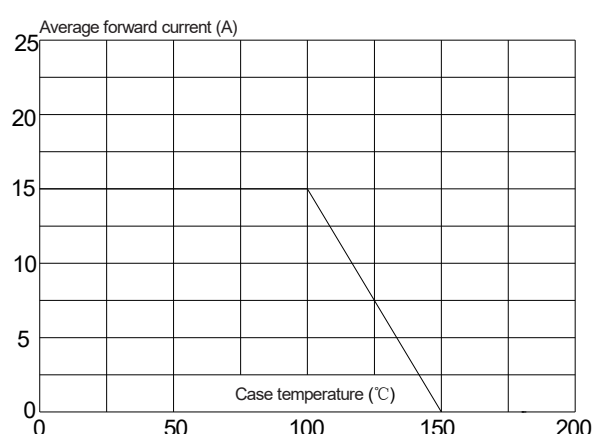


FIG.4: Forward current derating curve



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