

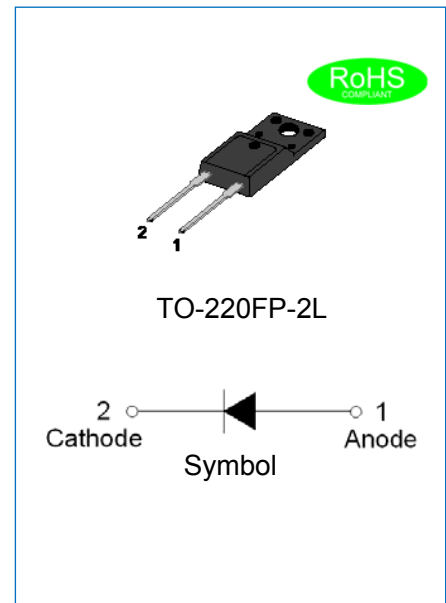


## JEFR0808FPL EPI FAST SOFT RECOVERY RECTIFIER

Rev.1.1

### 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
- ✧ Fast recovery time and soft recovery characteristics
- ✧ Low recovery loss
- ✧ Applications for discontinuous current mode (DCM) power factor correction (PFC), High frequency switched-mode power supplies, and TV power supplies



### MECHANICAL DATA

- ✧ Case: TO-220FP-2L molded plastic over passivated junction
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Weight: 2 gram

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

| Parameter  | Symbol         | JEFR0808FPL | Unit |
|--|----------------|-------------|------|
| Maximum repetitive peak reverse voltage  | $V_{RRM}$      | 800         | V    |
| Maximum RMS voltage  | $V_{RMS}$      | 560         | V    |
| Maximum DC blocking voltage  | $V_{DC}$       | 800         | V    |
| Maximum average forward current<br>$\delta=0.5, T_C=100^\circ\text{C}$             | $I_{F(AV)}$    | 8           | A    |
| Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$      | 125         | A    |
| Junction temperature and storage temperature range                                 | $T_j, T_{stg}$ | -55 to +175 | °C   |

### ISOLATION CHARACTERISTICS

| Symbol          | Parameter             | Conditions  | Min. | Typ. | Max. | Unit |
|-----------------|-----------------------|---|------|------|------|------|
| $V_{isol(RMS)}$ | RMS isolation voltage | 50 Hz $\leq f \leq$ 60 Hz; 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   |

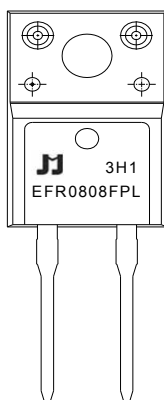
**ELECTRICAL CHARACTERISTICS**(Rating at 25°C case temperature unless otherwise specified.)

| Parameter                                       |                                  | Symbol   | Min. | Typ. | Max. | Unit    |
|---|----------------------------------|----------|------|------|------|---------|
| Forward voltage @ $I_F=8A$                      | $T_j=25^\circ C$                 | $V_F$    | -    | -    | 1.7  | V       |
|   | $T_j=150^\circ C$                |          | -    | -    | 1.5  |         |
| DC reverse current at rated DC blocking voltage | $T_j=25^\circ C$                 | $I_R$    | -    | -    | 5    | $\mu A$ |
|   | $T_j=150^\circ C$                |          | -    | -    | 200  |         |
| Reverse recovery time                           | $I_F=0.5A, I_R=1A, I_{rr}=0.25A$ | $t_{rr}$ | -    | -    | 75   | ns      |

**THERMAL RESISTANCES**

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

**MARKING**



|     |                             |
|-----|-----------------------------|
| EFR | EPI Fast Recovery Rectifier |
| 08  | $I_{F(AV)}=8A$              |
| 08  | $V_{RRM}:800V$              |
| FPL | Package:TO-220FP-2L         |

$xH1$ : Month, 1、2、3 ~ 9、A、B、C

$3x1$ :

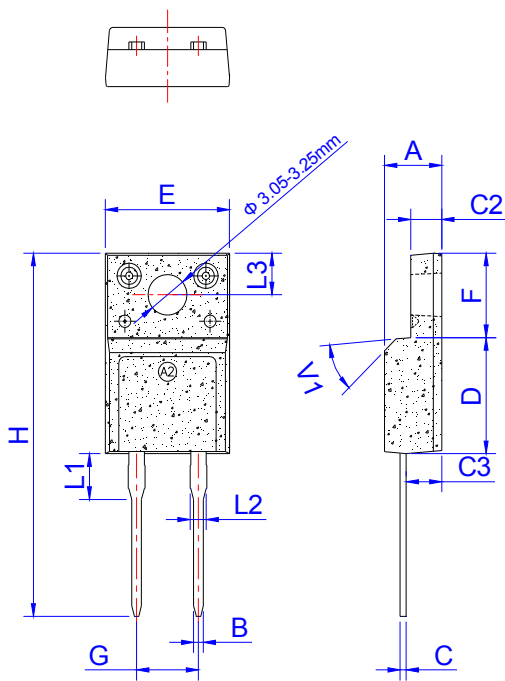
|      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|
| 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| H    | I    | J    | K    | L    | M    | N    |
| 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | ...  |
| O    | P    | Q    | R    | S    | T    | ...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

$3Hx$ : Batch number

**ORDERING INFORMATION**

|                            |     |                   |   |                |                |                     |
|----------------------------|-----|-------------------|---|----------------|----------------|---------------------|
| J                          | E   | F                 | R | 08             | 08             | FPL                 |
| JIEJIE<br>Microelectronics | Epi | Fast<br>Rectifier |   | $I_{F(AV)}=8A$ | $V_{RRM}:800V$ | Package:TO-220FP-2L |

**PACKAGE MECHANICAL DATA**

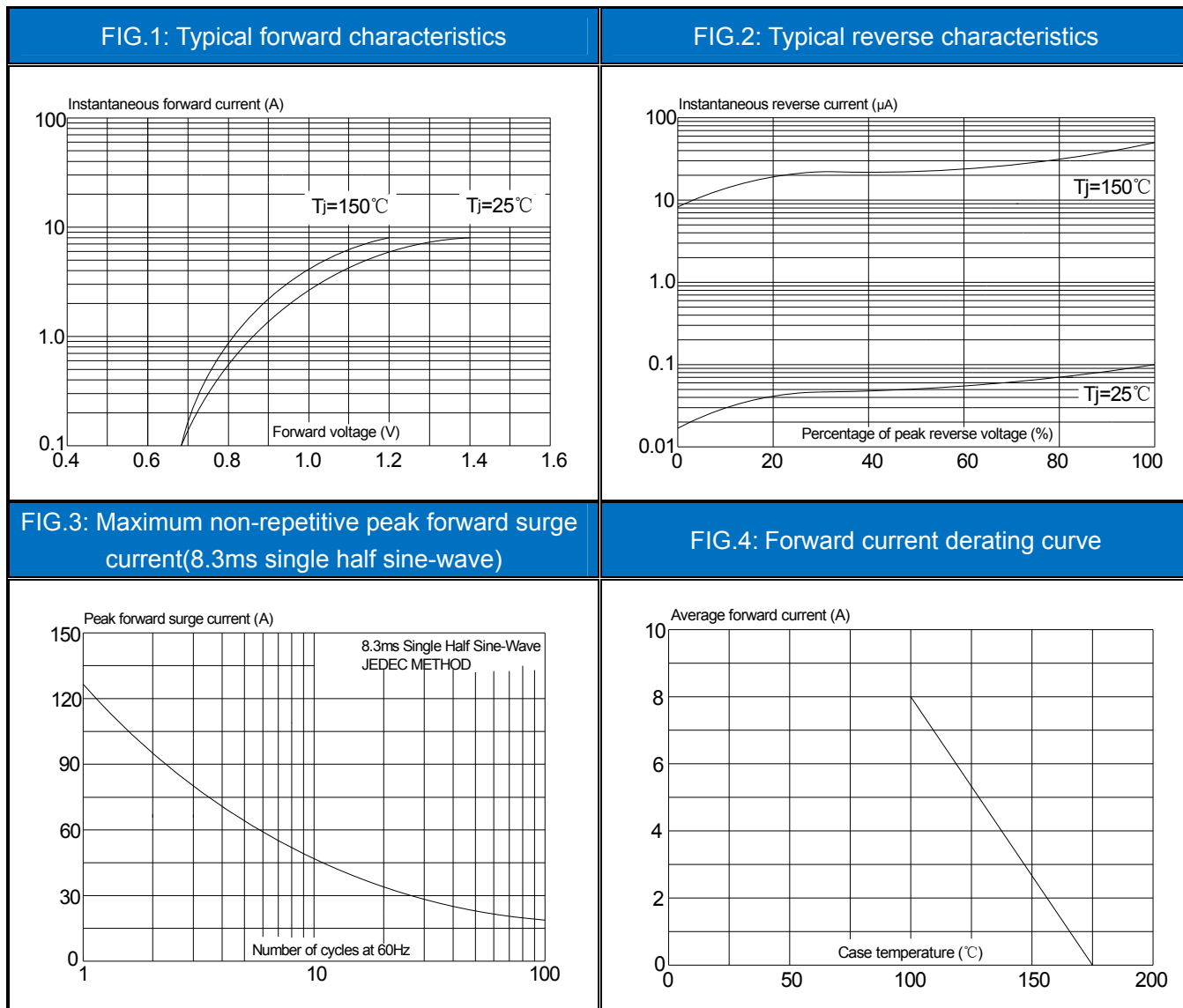


| Ref. | Dimensions  |      |      |        |       |       |
|------|-------------|------|------|--------|-------|-------|
|      | Millimeters |      |      | Inches |       |       |
|      | Min.        | Typ. | Max. | Min.   | Typ.  | Max.  |
| A    | 4.50        |      | 4.90 | 0.177  |       | 0.193 |
| B    | 0.74        | 0.80 | 0.83 | 0.029  | 0.031 | 0.033 |
| C    | 0.47        |      | 0.65 | 0.019  |       | 0.026 |
| C2   | 2.45        |      | 2.75 | 0.096  |       | 0.108 |
| C3   | 2.60        |      | 3.00 | 0.102  |       | 0.118 |
| D    | 8.80        |      | 9.30 | 0.346  |       | 0.366 |
| E    | 9.80        |      | 10.4 | 0.386  |       | 0.410 |
| F    | 6.40        |      | 6.80 | 0.252  |       | 0.268 |
| G    |             | 5.08 |      |        | 0.200 |       |
| H    | 28.0        |      | 29.8 | 1.102  |       | 1.173 |
| L1   |             | 3.63 |      |        | 0.143 |       |
| L2   | 1.14        |      | 1.70 | 0.045  |       | 0.067 |
| L3   |             | 3.30 |      |        | 0.130 |       |
| V1   |             | 45°  |      |        | 45°   |       |

**PACKAGE INFORMATION-TO-220FP-2L**

| OUTLINE | UNIT WEIGHT<br>(g/PCS) typ. | TUBE<br>(PCS) | PER CARTON<br>(PCS) |
|---------|-----------------------------|---------------|---------------------|
| TUBE    | 2                           | 50            | 5,000               |

CHARACTERISTICS CURVE




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