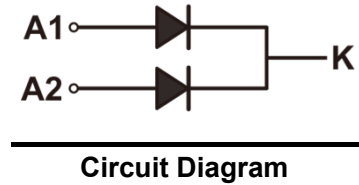
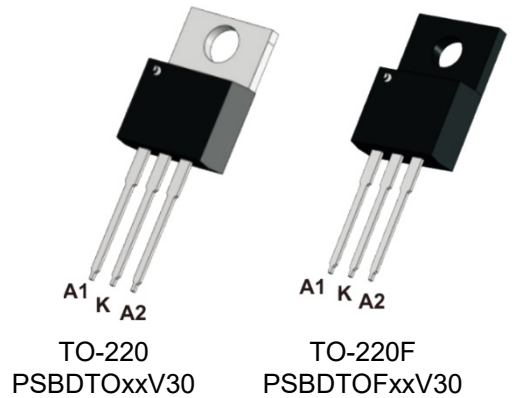


## Feature

- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High temperature soldering guaranteed
- Mounting position: any

## Mechanical Characteristics

- Case: TO-220
- Approx. Weight: 1.9g ( 0.067oz)
- Case: TO-220F
- Approx. Weight: 2.1g ( 0.07oz)
- Terminals: Lead solderable per MIL-STD-202, Method 208



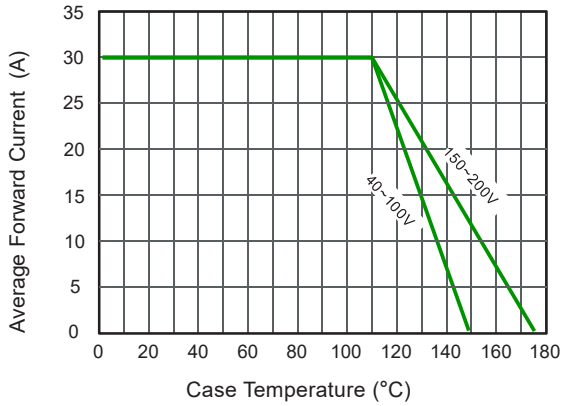
## Maximum Ratings and Thermal Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter  | Symbol          | PSBDTO<br>40V30  | PSBDTO<br>45V30  | PSBDTO<br>60V30  | PSBDTO<br>100V30  | PSBDTO<br>150V30  | PSBDTO<br>200V30  | Units              |                  |
|--|-----------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|--------------------|------------------|
|  |                 | PSBDTO<br>F40V30 | PSBDTO<br>F45V30 | PSBDTO<br>F60V30 | PSBDTO<br>F100V30 | PSBDTO<br>F150V30 | PSBDTO<br>F200V30 |                    |                  |
| Maximum Repetitive Peak Reverse Voltage  | $V_{RRM}$       | 40               | 45               | 60               | 100               | 150               | 200               | V                  |                  |
| Maximum RMS voltage  | $V_{RMS}$       | 28               | 32               | 42               | 70                | 105               | 140               | V                  |                  |
| Maximum DC Blocking Voltage  | $V_{DC}$        | 40               | 45               | 60               | 100               | 150               | 200               | V                  |                  |
| Maximum Average Forward Rectified Current per diode per device   | $I_{F(AV)}$     | 15<br>30         |                  |                  |                   |                   |                   | A                  |                  |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load                               | $I_{FSM}$       | 200              |                  |                  |                   |                   |                   | A                  |                  |
| Maximum Forward Voltage at 15 A  | $V_F$           | 0.75             |                  | 0.80             | 0.88              | 0.92              | 0.95              | V                  |                  |
| Maximum DC Reverse Current at Rated DC Blocking Voltage<br>$T_a = 25^\circ\text{C}$<br>$T_a = 125^\circ\text{C}$ | $I_R$           | 0.1<br>20        |                  |                  | 0.05<br>20        |                   |                   | mA                 |                  |
| Typical Junction Capacitance Per Element <sup>1)</sup>   | $C_J$           | 600              |                  | 400              |                   |                   |                   | pF                 |                  |
| Typical Thermal Resistance <sup>2)</sup>   | $R_{\theta JA}$ | 45               |                  |                  |                   |                   |                   | $^\circ\text{C/W}$ |                  |
| Operating and Storage Temperature Range  | $T_J, T_{STG}$  | -55~+150         |                  |                  |                   | -55~+175          |                   |                    | $^\circ\text{C}$ |

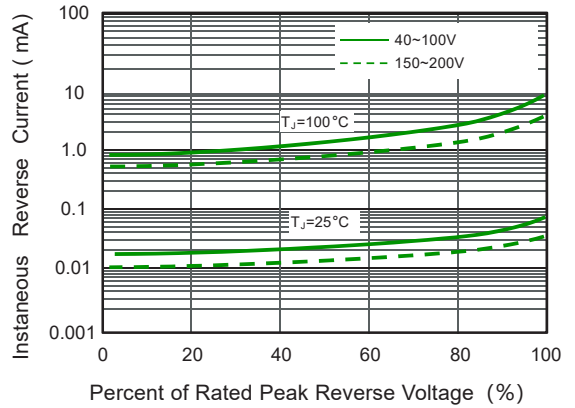
### Notes:

- 1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- 2) P.C.B. mounted with 10cm X 10cm X 1mm copper pad areas.

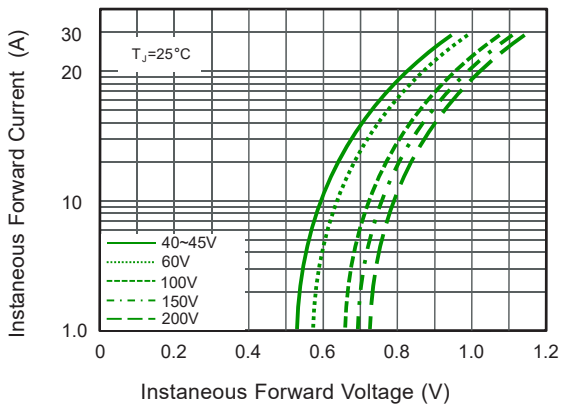
## Typical Characteristics



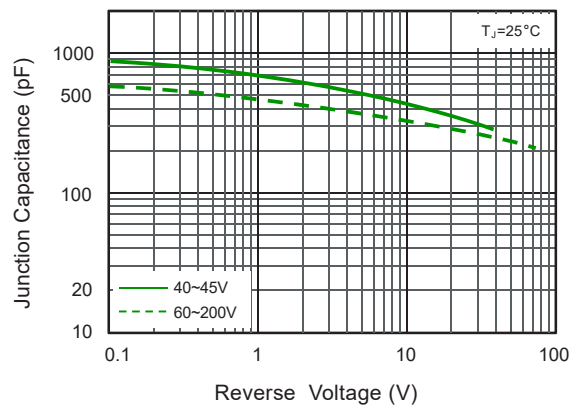
**Fig.1 Typical Forward Current Derating Curve**



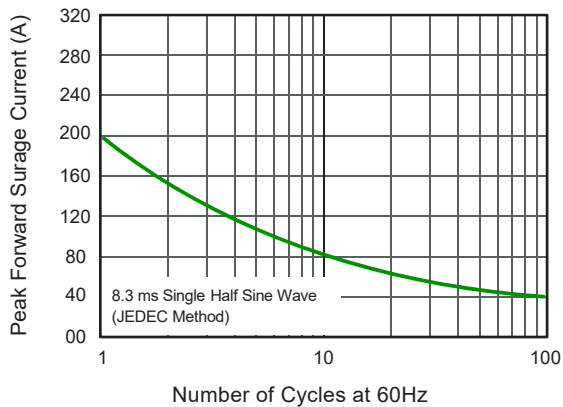
**Fig.2 Typical Reverse Characteristics**



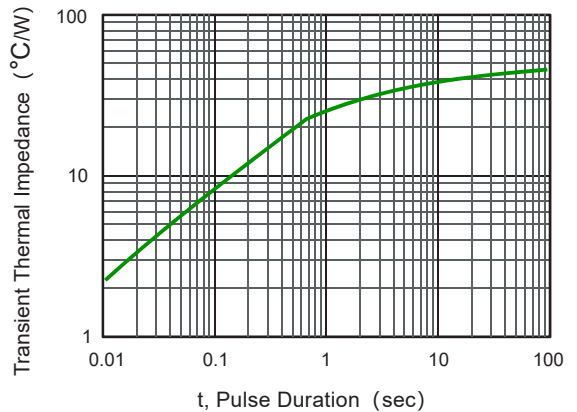
**Fig.3 Typical Forward Characteristic(per leg)**



**Fig.4 Typical Junction Capacitance**



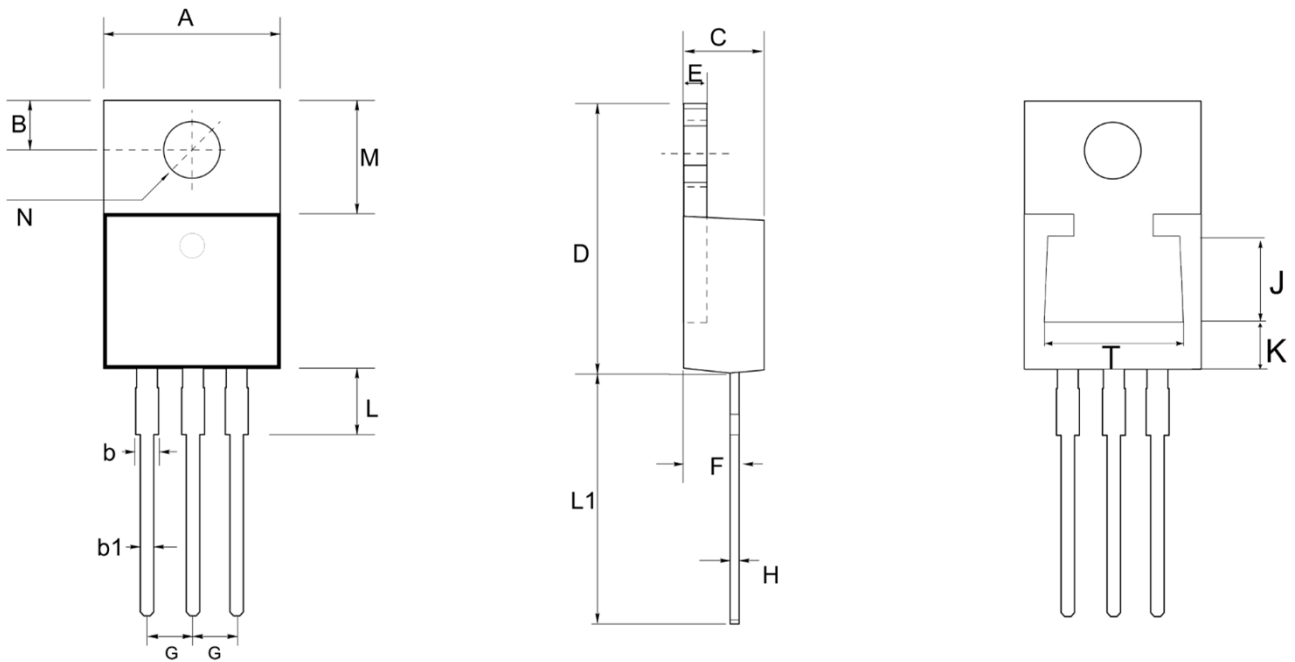
**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



**Fig.6- Typical Transient Thermal Impedance**

# Schottky Barrier Rectifiers

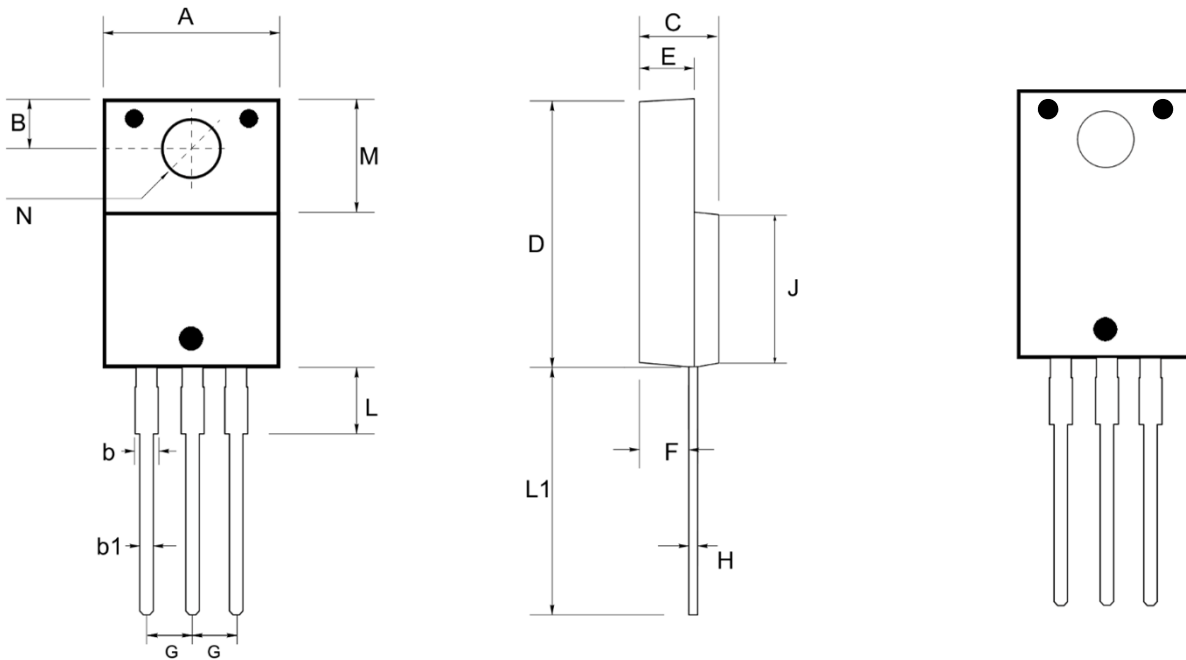
## Product dimension (TO-220)



| Dim | Millimeters |       | Inches     |       |
|-----|-------------|-------|------------|-------|
|     | Min         | Max   | Min        | Max   |
| A   | 9.85        | 10.45 | 0.388      | 0.411 |
| B   | 2.54        | 2.94  | 0.100      | 0.116 |
| b   | 1.14        | 1.77  | 0.045      | 0.070 |
| b1  | 0.62        | 0.94  | 0.024      | 0.037 |
| C   | 4.42        | 4.76  | 0.174      | 0.187 |
| D   | 14.60       | 16.00 | 0.575      | 0.630 |
| E   | 1.14        | 1.40  | 0.045      | 0.055 |
| F   | 2.20        | 2.80  | 0.087      | 0.110 |
| G   | 2.54 Typ.   |       | 0.100 Typ. |       |
| H   | 0.35        | 0.64  | 0.014      | 0.025 |
| L   | 2.80        | 4.20  | 0.110      | 0.165 |
| L1  | 13.08       | 14.79 | 0.515      | 0.582 |
| M   | 6.60 Typ.   |       | 0.260 Typ. |       |
| N   | 3.80 Typ.   |       | 0.150 Typ. |       |
| J   | 4.65 Ref.   |       | 0.183 Ref. |       |
| T   | 7.70 Ref.   |       | 0.303 Ref. |       |
| K   | 3.22 Ref.   |       | 0.127 Ref. |       |


# Schottky Barrier Rectifiers

## Product dimension (TO-220F)



| Dim | Millimeters |       | Inches     |       |
|-----|-------------|-------|------------|-------|
|     | Min         | Max   | Min        | Max   |
| A   | 9.85        | 10.50 | 0.388      | 0.413 |
| B   | 2.54        | 2.85  | 0.100      | 0.112 |
| b   | 1.10        | 1.40  | 0.043      | 0.055 |
| b1  | 0.50        | 0.80  | 0.020      | 0.031 |
| C   | 4.40        | 4.70  | 0.173      | 0.185 |
| D   | 14.70       | 16.00 | 0.579      | 0.630 |
| E   | 2.50        | 2.90  | 0.098      | 0.114 |
| F   | 2.50        | 2.80  | 0.098      | 0.110 |
| G   | 2.54 Typ.   |       | 0.100 Typ. |       |
| H   | 0.41        | 0.70  | 0.016      | 0.028 |
| L   | 2.30        | 2.90  | 0.091      | 0.114 |
| L1  | 13.00       | 14.30 | 0.512      | 0.563 |
| M   | 6.30        | 7.00  | 0.248      | 0.276 |
| N   | 3.40 Typ.   |       | 0.134 Typ. |       |


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