

**SURFACE MOUNT  
SCHOTTKY BARRIER RECTIFIER**

**REVERSE VOLTAGE – 100 Volts  
FORWARD CURRENT – 3.0 Amperes**

**FEATURES**

- Very low profile package
- High efficiency
- Extremely fast switching
- Negligible switching losses
- Low forward voltage drop, low power loss
- Qualified to AEC-Q101 Rev\_C

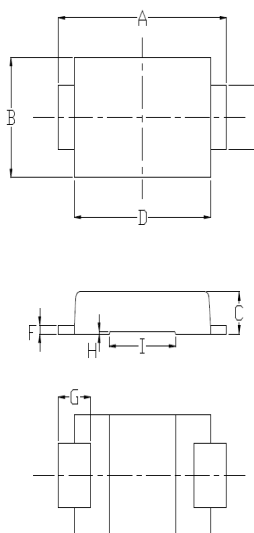
**APPLICATION**

- High frequency inverters, freewheeling
- DC/DC converters
- Polarity protection

**MECHANICAL DATA**

- Case: JEDEC DO-221AC
- Case Material: "Green" molding compound, UL Flammability classification 94V-0, (No Br. SB. Cl.) "Halogen-free".
- Moisture Sensitivity: Level 1 per J-STD-020
- Lead free finish, RoHS compliant
- Weight: 0.0354 grams (Approximate)
- Marking code: B3100

**F3-D**



| F3-D                        |       |      |       |
|-----------------------------|-------|------|-------|
| DIM                         | MIN   | TYP  | MAX   |
| A                           | 4.80  | 5.20 | 5.60  |
| B                           | 2.25  | 2.80 | 2.95  |
| C                           | 0.90  | 1.00 | 1.10  |
| D                           | 3.95  | 4.20 | 4.60  |
| E                           | 1.25  | 1.50 | 1.65  |
| F                           | 0.15  | 0.20 | 0.40  |
| G                           | 0.75  | 1.00 | 1.50  |
| H                           | 0.025 | 0.05 | 0.075 |
| I                           | 1.90  | 2.05 | 2.20  |
| All dimension in millimeter |       |      |       |

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

**ABSOLUTE RATINGS**

| PARAMETER                                                                          | SYMBOL     | VALUE       | UNIT |
|------------------------------------------------------------------------------------|------------|-------------|------|
| Maximum repetitive peak reverse voltage                                            | $V_{RRM}$  | 100         | V    |
| Maximum DC blocking voltage                                                        | $V_{DC}$   | 100         | V    |
| Maximum Average rectified output current                                           | $I_{(AV)}$ | 3.0         | A    |
| Peak forward surge current 8.3ms single half sine-wave Superimposed on rated load. | $I_{FSM}$  | 70          | A    |
| Operating junction temperature range                                               | $T_J$      | -55 to +175 | °C   |

**STATIC ELECTRICAL CHARACTERISTICS**

| PARAMETER                             | TEST CONDITIONS                                       | SYMBOL | TYP        | MAX         | UNIT     |
|---------------------------------------|-------------------------------------------------------|--------|------------|-------------|----------|
| Forward voltage (Note 1)              | $I_F=3.0A$<br>$T_J=25^{\circ}C$<br>$T_J=125^{\circ}C$ | $V_F$  | --<br>0.62 | 0.835<br>-- | V        |
| Leakage current                       | $V_R=100V$<br>$T_J=25^{\circ}C$<br>$T_J=125^{\circ}C$ | $I_R$  | --<br>0.73 | 6<br>3      | uA<br>mA |
| Typical junction capacitance (Note 2) |                                                       | $C_J$  | 98         |             | pF       |

**THERMAL CHARACTERISTICS**

| PARAMETER                             | SYMBOL     | TYP | UNIT |
|---------------------------------------|------------|-----|------|
| Typical thermal resistance (Note 3,4) | $R_{thJC}$ | 25  | °C/W |
|                                       | $R_{thJA}$ | 80  |      |

**Note :**

- (1) 300us pulse width, 2% duty cycle.
- (2) Measured at 1.0MHz and applied voltage of 4.0VDC.
- (3) Thermal resistance test performed in accordance with JESD-51.
- (4) Unit mounted on glass-epoxy substrate with 1oz/ft<sup>2</sup> 10mm x 12 mm copper pad.

REV. 0, Mar-2016, KSHP28

RATING AND CHARACTERISTIC CURVES  
FB3100D



FIG.1- FORWARD CURRENT DERATING CURVE

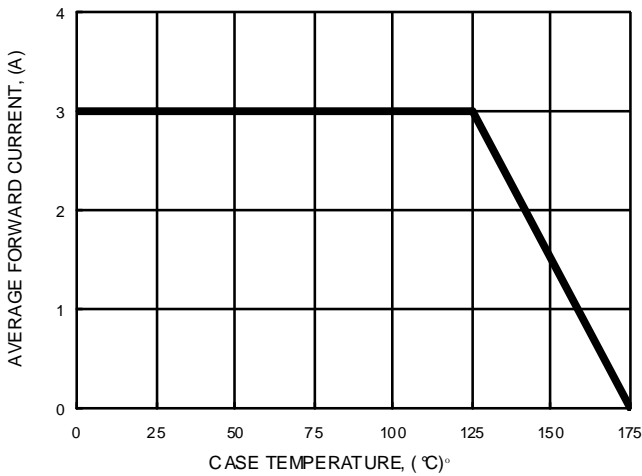


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

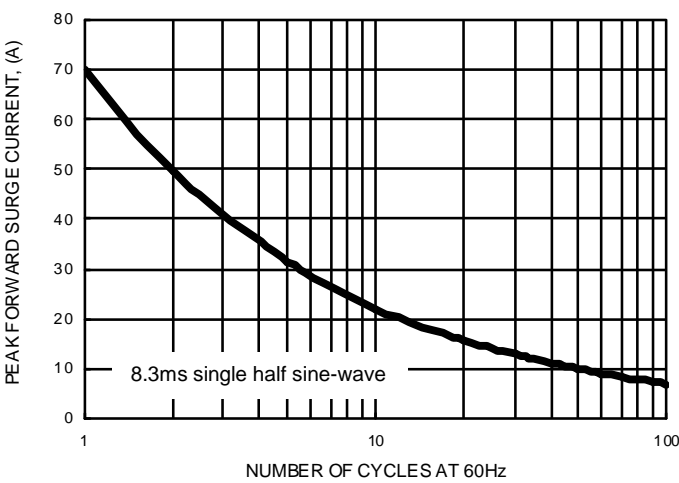


FIG.3- TYPICAL FOWRD CHARACTERISTICS

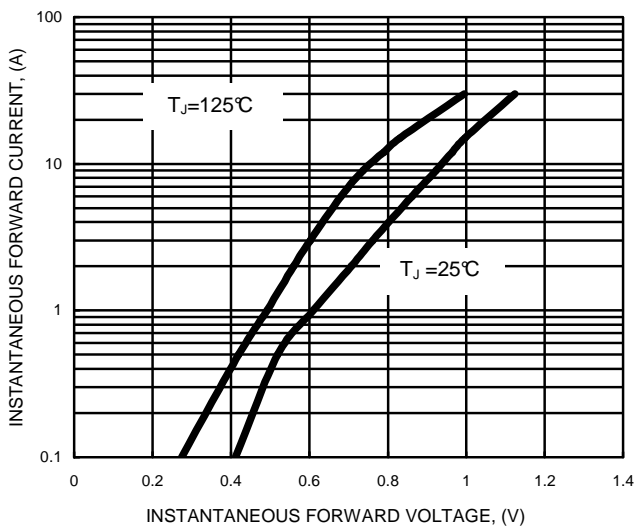


FIG.4- TYPICAL JUNCTION CAPACITANCE

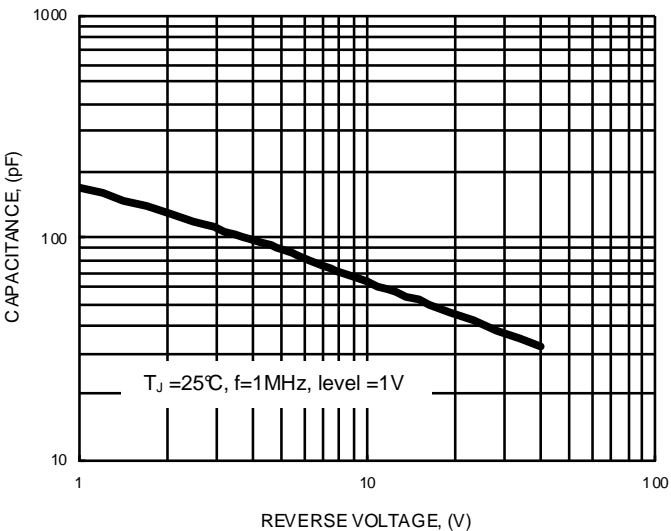
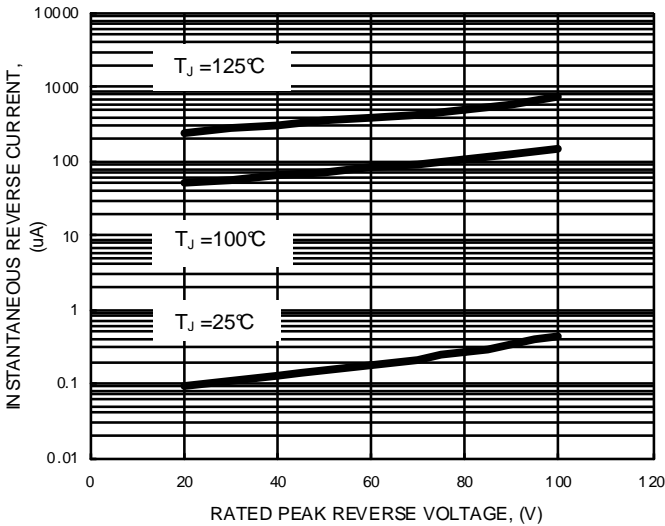


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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