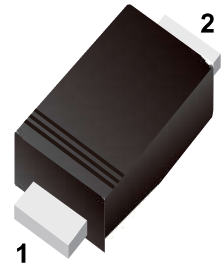


■ Ultrafast Efficient Rectifier
■ FEATURES

- Halogen-free type
- Compliance to RoHS product
- GPRC (Glass passivated rectifier chip) inside
- Lead less chip form, no lead damage
- Low power loss, High efficiency
- High current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0


■ Simplified outline(SOD-123FL)
■ APPLICATION

- High frequency rectification
- AC/DC Power Supply

■ MARKING

| | |
|---------|-----|
| Marking | 167 |
|---------|-----|

Absolute Maximum Ratings (Ta = 25 °C)

| ITEM | Symbol | Conditions | BYD167 | Unit |
|-------------------------------------|---------|-----------------------------------|-------------|------|
| Repetitive peak reverse voltage | VRRM | | 600 | V |
| Average forward current | IF(AV) | TL = 110 °C | 1.0 | A |
| Peak forward surge current | IFSM | 8.3ms single half sine-wave | 25 | A |
| Reverse recovery time | Trr | IF = 0.5A, IR = 1.0A, Irr = 0.25A | 35 | nS |
| Operating storage temperature Range | Tj,TSTG | | -65 to +175 | °C |

Electrical characteristics (Ta = 25 °C)

| ITEM | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|---------------------------------|---------|------------------------------|------|------|------|------|
| Forward voltage | VF | IF = 0.1A | - | 0.85 | - | V |
| | | IF = 0.5A | - | 1.15 | - | |
| | | IF = 1.0A | - | 1.40 | 1.70 | |
| Repetitive peak reverse current | IRRM | VR = Max. VRRM , Ta = 25 °C | - | 0.20 | 5 | uA |
| Junction capacitance | Cj | VR = 4V, f = 1.0 MHz | - | 10 | - | pF |
| Thermal resistance | Rth(JA) | Junction to ambient (NOTE 1) | - | 80 | - | °C/W |
| | Rth(JL) | Junction to lead (NOTE 1) | - | 40 | - | |

NOTES : (1) Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas.
 (2) Preliminary draft.

FIG.1 - FORWARD CURRENT DERATING CURVE

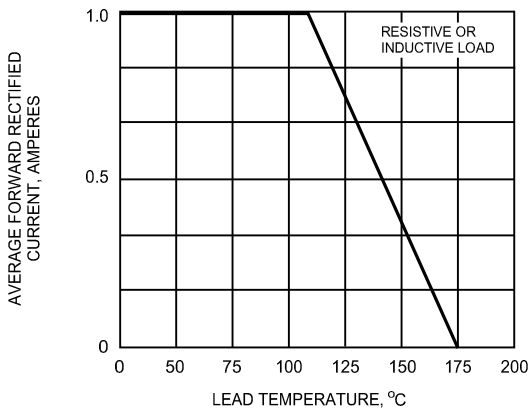


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

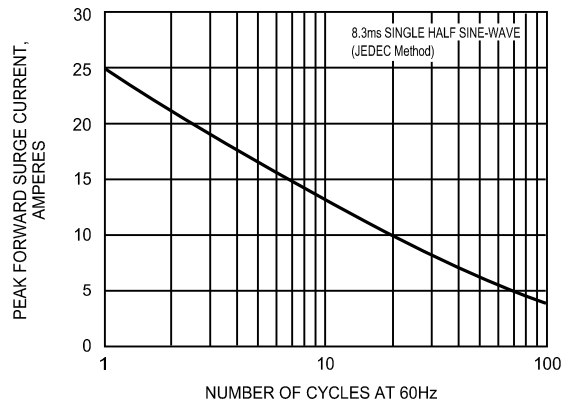


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

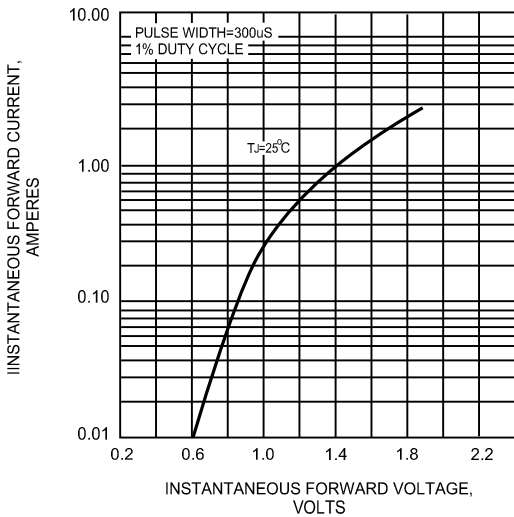


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

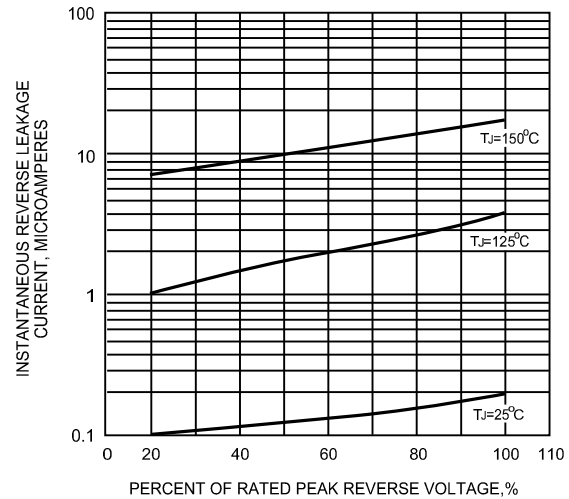
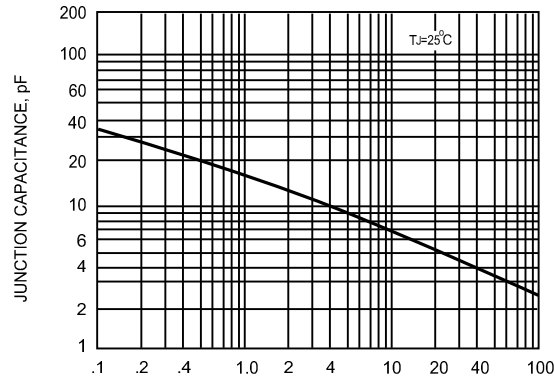
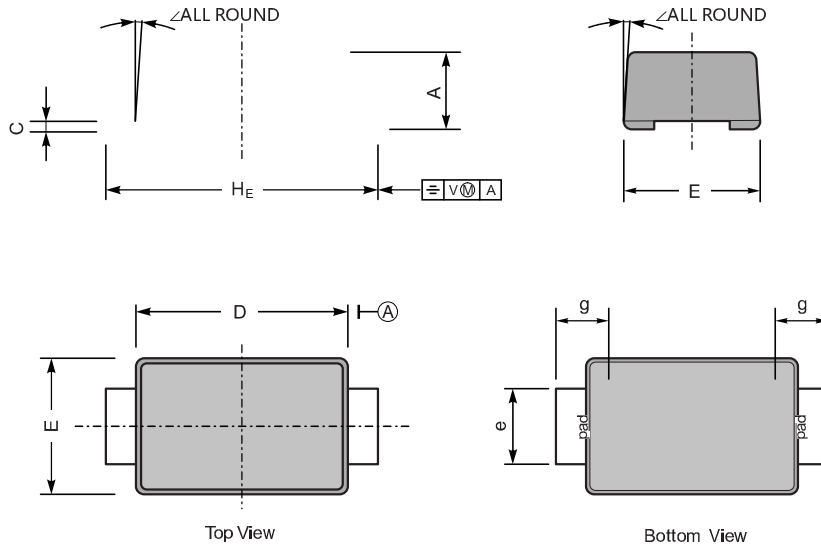


FIG.5 - TYPICAL JUNCTION CAPACITANCE



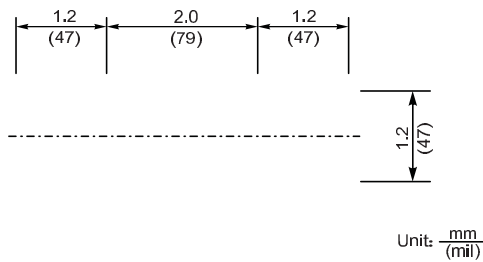
Package Outline SOD-123FL

Plastic surface mounted package; 2 leads



| UNIT | | A | C | D | E | e | g | H_E | \angle |
|------|-----|-----|------|-----|-----|-----|-----|-------|----------|
| mm | max | 1.3 | 0.20 | 2.9 | 1.9 | 1.1 | 0.9 | 3.8 | 7° |
| | min | 0.9 | 0.12 | 2.6 | 1.7 | 0.8 | 0.7 | 3.5 | |
| mil | max | 43 | 7.9 | 114 | 75 | 43 | 35 | 150 | |
| | min | 35 | 4.7 | 102 | 67 | 31 | 28 | 138 | |

The recommended mounting pad size



Summary of Packing Options

| Package | Packing Description | Packing Quantity | Industry Standard |
|-----------|---------------------|------------------|-------------------|
| SOD-123FL | Tape/Reel, 13" reel | 10000 | EIA-481-1 |
| | Tape/Reel, 7" reel | 3000 | EIA-481-1 |