



EBRT12L120T



Excellent Schottky Barrier Rectifiers



TO-277

Features

- Schottky barrier diodes
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 260 °C, 10 s
- Low profile
- Heatsink design

Ordering Information

| Part No. | Package | Packing |
|-------------|---------|-------------|
| EBRT12L120T | TO-277 | 5000 / Reel |

Device P/N

| Part Number | Remark |
|---------------|--------------|
| EBRT12L120T | General |
| EBRT12L120T-H | Halogen Free |

Primary Characteristics

| | | |
|-----------|------|----|
| I_F | 12 | A |
| V_{RRM} | 120 | V |
| I_{FSM} | 200 | A |
| V_F | 0.78 | V |
| T_J max | 150 | °C |

Mechanical Data

- Case: TO-277
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead Free Plating (Tin Finish). Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.096 grams (approximate)

Maximum Ratings (TA=25°C unless otherwise noted)

| PARAMETER | SYMBOL | EBRT12L120T | UNIT |
|--|-----------------|------------------------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 120 | V |
| Maximum RMS voltage | V_{RMS} | 84 | V |
| Maximum DC blocking voltage | V_{DC} | 120 | V |
| Maximum average forward rectified current | I_F | 12 | A |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 200 | A |
| Maximum Instantaneous Forward Voltage IF=3A @ 25°C IF=12A @ 25°C | V_F | 0.56 Typ. 0.78 Max. | V |
| Maximum DC Reverse Current @ TA=25°C at Rated DC Blocking Voltage @ TA=125°C | I_R | 0.2 20 | mA |
| Typical Junction Capacitance(NOTE1) | C_j | 770 | pF |
| Typical Thermal Resistance | $R_{\theta JC}$ | 10 | °C/W |
| Operating Temperature Range | T_J | -55 to +150 | °C |
| Storage Temperature Range | T_{STG} | -55 to +150 | °C |
| Marking Code | | 12L120T、T12L120T | |

NOTES:

1. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC



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Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

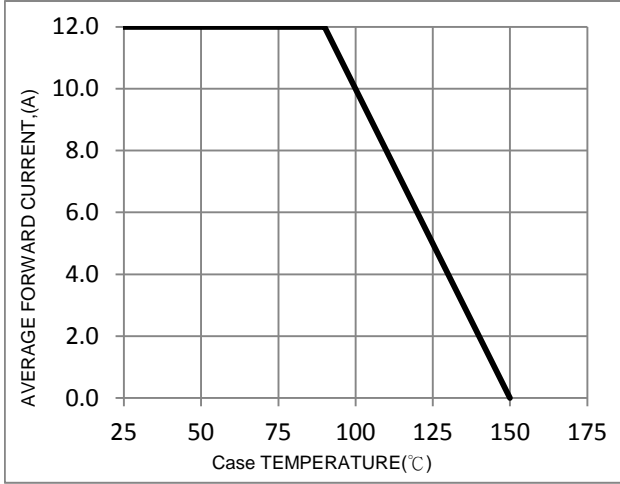


FIG. 2-Typical Forward Characteristics

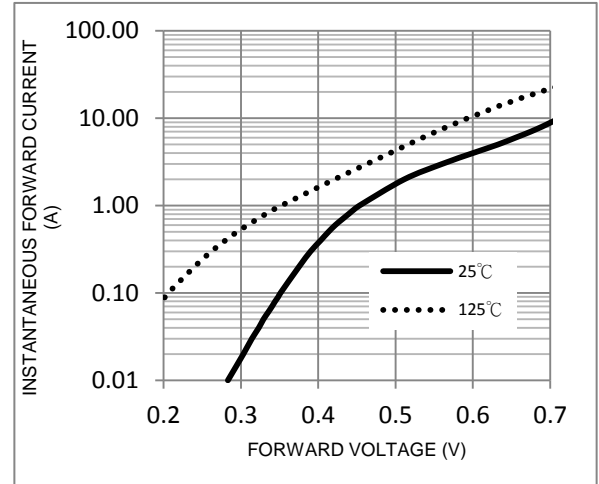


FIG. 3-Maximum Non-Repetitive Forward Surge Current

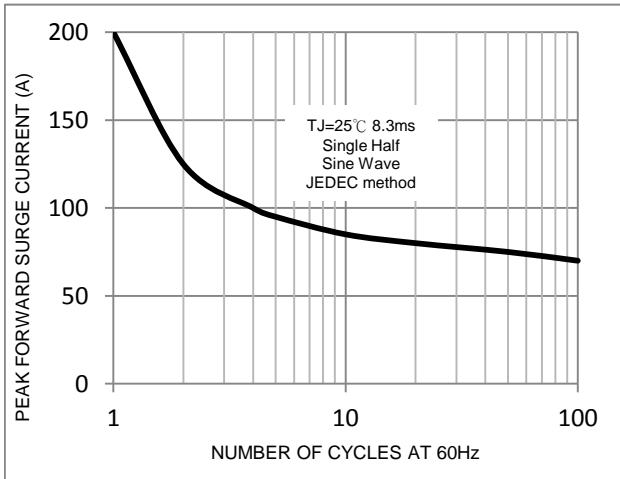


FIG. 4-Typical Reverse Characteristics

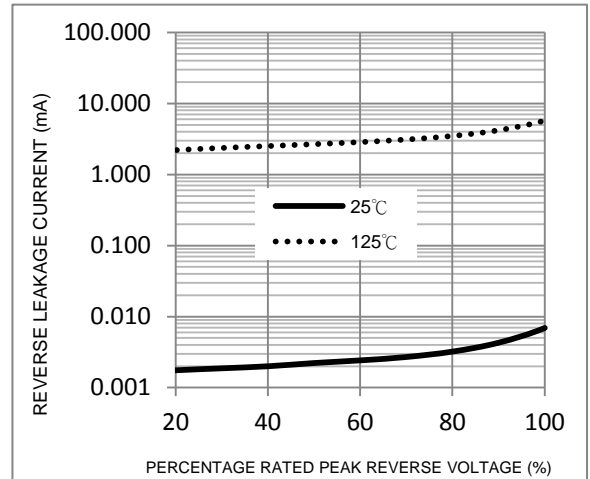
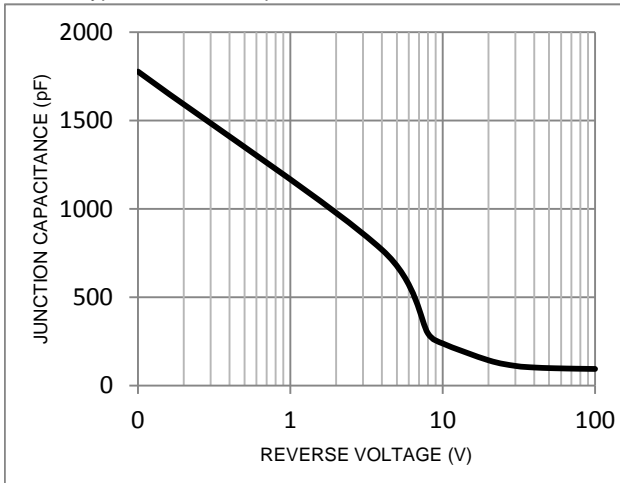


FIG. 5-Typical Junction Capacitance



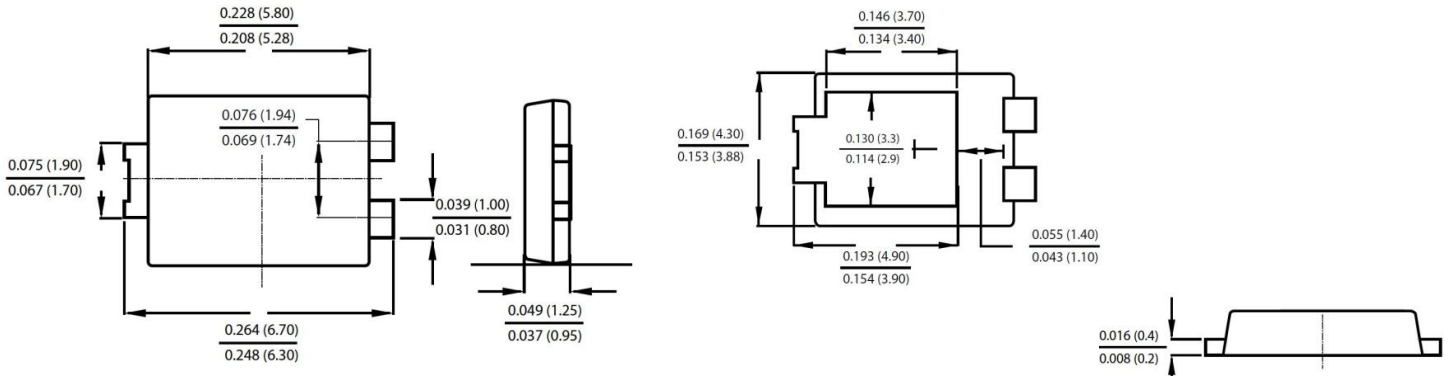


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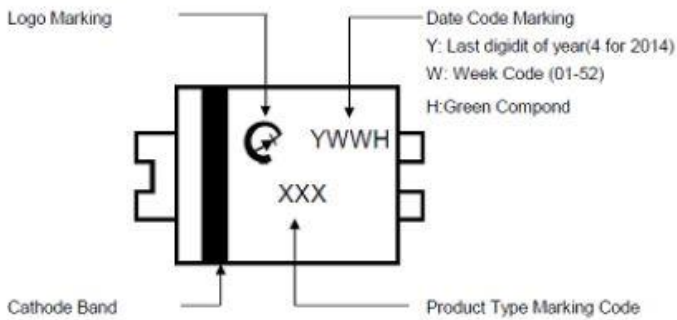
Package Outline Dimensions



TO-277

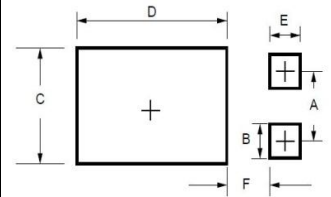
Dimensions in inches and (millimeters)

Marking Information



Suggested Pad Layout

| Dimension | Outline | TO-277 |
|-----------|---------|--------|
| A | | 1.94 |
| B | | 1.00 |
| C | | 3.20 |
| D | | 4.90 |
| E | | 1.00 |
| F | | 1.40 |



Tape & Reel Specification

| ITEM | SYMBOL | TO-277 (mm) |
|------------------------|--------|-------------|
| Carrier width | A | 4.38(max) |
| Carrier length | B | 6.9(MAX) |
| Carrier depth | C | 1.4±0.1 |
| Sprocket hole | d | 1.50±0.1 |
| Reel outside diameter | D | 330±2.0 |
| Feed hole diameter | D0 | 13.0±0.2 |
| Reel inner diameter | D1 | 100 (min.) |
| Sprocket hole position | E | 1.75±0.1 |
| Punch hole position | F | 7.5±0.05 |
| Sprocket hole pitch | P | 8.0±0.1 |
| Sprocket hole pitch | Po | 4.0±0.1 |
| Embossment center | P1 | 2.0±0.10 |
| Overall tape thickness | T | 0.6 (max) |
| Tape width | W | 16.0±0.3 |
| Reel width | W2 | 20(max) |
| Reel width | W1 | 16(max) |

