



# P40E45FCT



## Excellent Schottky Barrier Rectifiers



ITO-220AB

| Features  |
|---|
| <ul style="list-style-type: none"> <li>• Low Forward Voltage Drop</li> <li>• Excellent High Temperature Stability</li> <li>• Excellent Barrier Rectifier Technology</li> <li>• Soft, Fast Switching Capability</li> </ul> |

| Device P/N  |              |
|-------------|--------------|
| Part Number | Remark       |
| P40E45FCT   | General      |
| P40E45FCT-H | Halogen Free |

| Primary Characteristics |      |    |
|-------------------------|------|----|
| $I_F$                   | 40   | A  |
| $V_{RRM}$               | 45   | V  |
| $I_{FSM}$               | 300  | A  |
| $V_F$                   | 0.48 | V  |
| $T_J \text{ max}$       | 150  | °C |

| Ordering Information |           |                        |
|----------------------|-----------|------------------------|
| Part No.             | Package   | Packing                |
| P40E45FCT            | ITO-220AB | 50 & 2000 / Tube & Box |

| Mechanical Data  |
|--|
| <ul style="list-style-type: none"> <li>• Case: ITO-220AB</li> <li>• Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0</li> <li>• Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208</li> <li>• Weight: 1.645 grams (approximate)</li> </ul> |

| Maximum Ratings (TA=25°C unless otherwise noted)   |                 |                        |      |
|--|-----------------|------------------------|------|
| PARAMETER  | SYMBOL          | P40E45FCT              | UNIT |
| Maximum repetitive peak reverse voltage  | $V_{RRM}$       | 45                     | V    |
| Maximum RMS voltage  | $V_{RMS}$       | 31.5                   | V    |
| Maximum DC blocking voltage  | $V_{DC}$        | 45                     | V    |
| Maximum average forward rectified current (Total)<br>(Per Leg)                           | $I_F$           | 40<br>20               | A    |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load       | $I_{FSM}$       | 300                    | A    |
| Maximum Instantaneous Forward Voltage<br>$I_F=5A @ 25^\circ C$<br>$I_F=20A @ 25^\circ C$ | $V_F$           | 0.33 Typ.<br>0.48 Max. | V    |
| Maximum DC Reverse Current @ TA=25°C<br>at Rated DC Blocking Voltage @ TA=125°C          | $I_R$           | 0.5<br>50              | mA   |
| Typical Junction Capacitance(NOTE1)  | $C_j$           | 1210                   | pF   |
| Typical Thermal Resistance   | $R_{\theta JC}$ | 3                      | °C/W |
| Operating Temperature Range  | $T_J$           | -55 to +150            | °C   |
| Storage Temperature Range  | $T_{STG}$       | -55 to +175            | °C   |
| Marking Code   |                 | P40E45FCT、40E45FCT     |      |

NOTES:

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

### Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

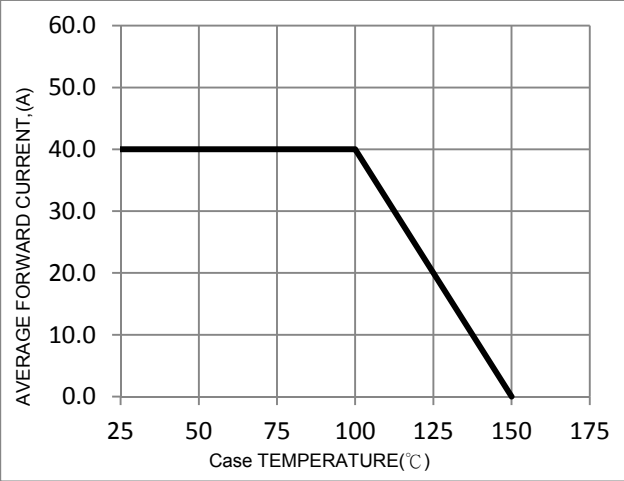


FIG. 2-Typical Forward Characteristics

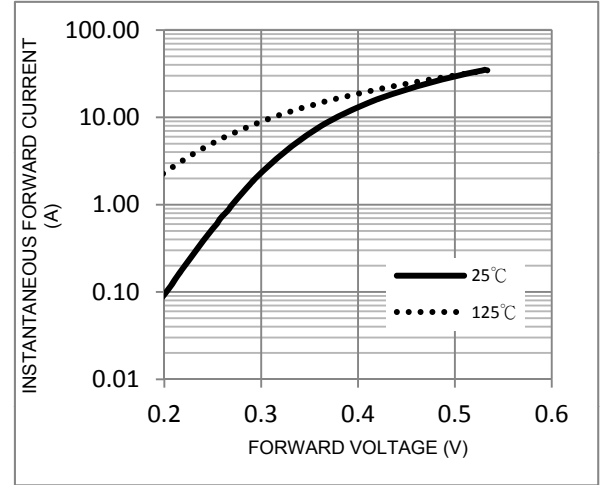


FIG. 3-Maximum Non-Repetitive Forward Surge Current

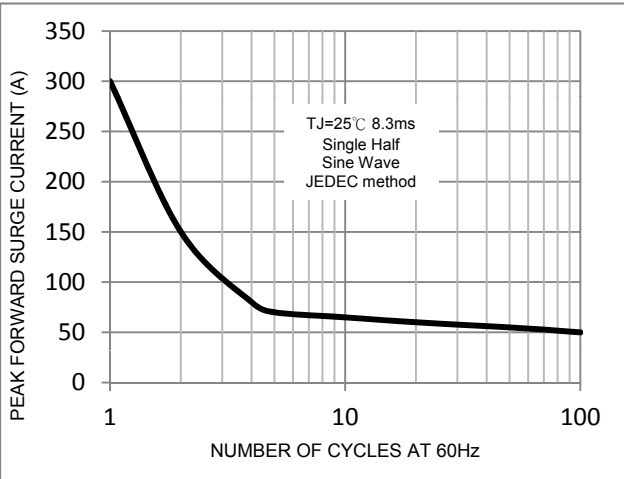


FIG. 4-Typical Reverse Characteristics

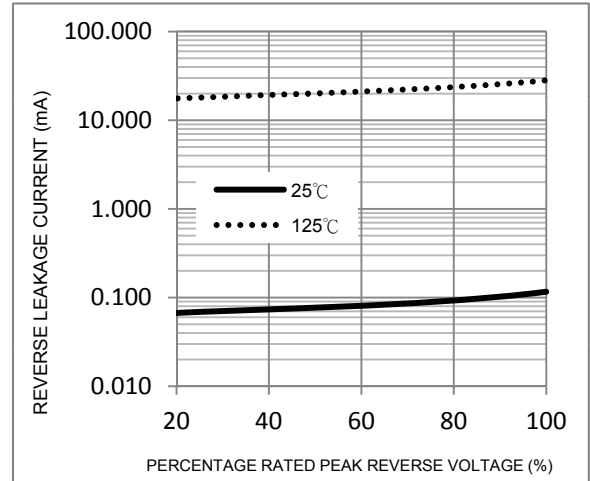
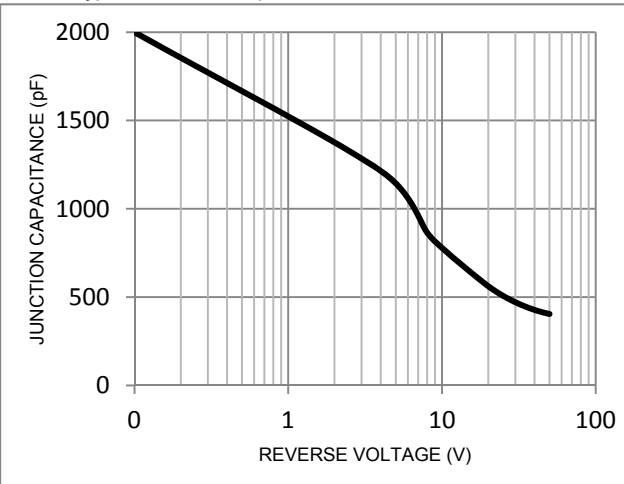
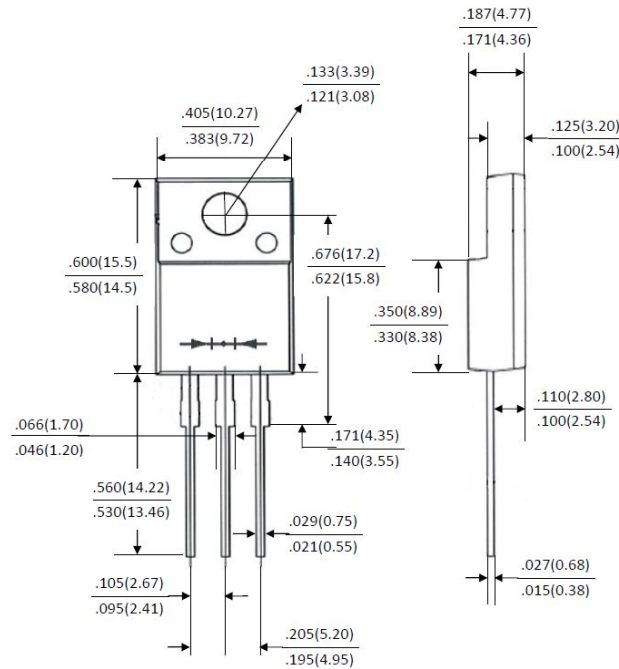


FIG. 5-Typical Junction Capacitance



### Package Outline Dimensions



### ITO-220AB

Dimensions in inches and (millimeters)

### Marking Information

