

## Trench Schottky Barrier Rectifiers

**Reverse Voltage - 80 V**

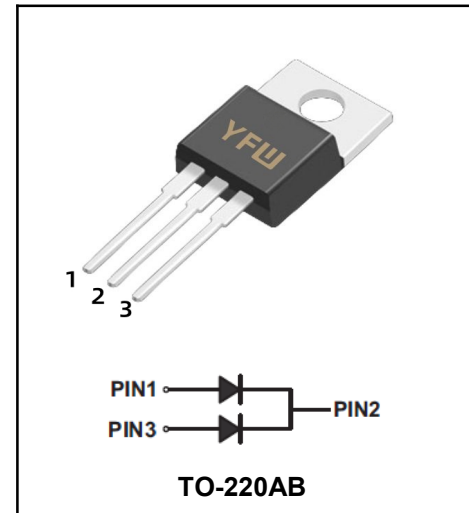
**Forward Current - 40 A**

### Features

- ◆The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆Construction utilizes void-free molded plastic technique
- ◆Low forward voltage
- ◆High forward surge current capability
- ◆High temperature soldering guaranteed  
260°C/10 seconds at terminals

### Mechanical Data

- ◆Case : Molded plastic body
- ◆Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- ◆Polarity : Polarity symbol marking on body
- ◆Mounting Position : Any



### Primary Characteristic

|                   |              |
|-------------------|--------------|
| $I_{(AV)}$        | <b>2*20A</b> |
| $V_{RRM}$         | <b>80V</b>   |
| $I_{FSM}$         | <b>300A</b>  |
| $V_F$             | <b>0.65V</b> |
| $T_J \text{ Max}$ | <b>150°C</b> |

### Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise specified

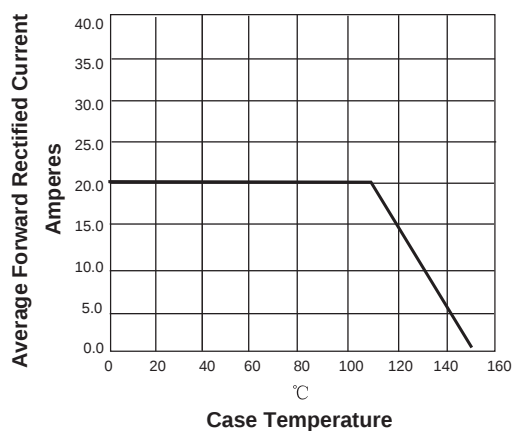
| Parameter                                                                                               | Symbols         | Value      | Units |
|---------------------------------------------------------------------------------------------------------|-----------------|------------|-------|
| Maximum Repetitive Peak Reverse Voltage                                                                 | $V_{RRM}$       | 80         | V     |
| Working Peak Reverse Voltage                                                                            | $V_{RWM}$       | 56         | V     |
| Maximum DC Blocking Voltage                                                                             | $V_{DC}$        | 80         | V     |
| Maximum Average Forward Rectified Current<br>Per device<br>rectified current at $T_c=110^\circ\text{C}$ | $I_{(AV)}$      | 40<br>20   | A     |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave                                                 | $I_{FSM}$       | 300        | A     |
| Operating Temperature Range                                                                             | $T_J$           | -50 ~ +150 | °C    |
| Storage Temperature Range                                                                               | $T_{STG}$       | -50 ~ +150 | °C    |
| Typical Thermal Resistance                                                                              | $R_{\theta JC}$ | 2.0        | °C/W  |

### Electrical Characteristics ( $T_a=25^\circ\text{C}$ unless otherwise specified)

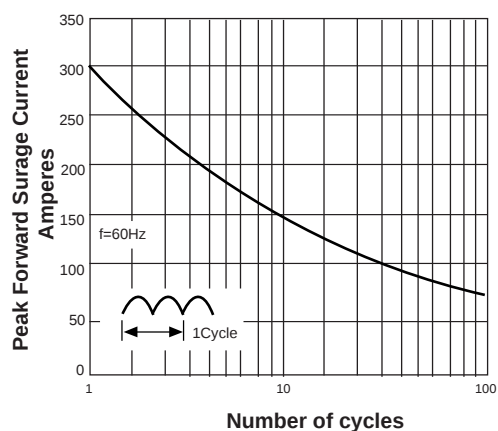
| Characteristics                                            | Symbols | Value   |           | Units     |
|------------------------------------------------------------|---------|---------|-----------|-----------|
| Forward Voltage Drop                                       |         | Typ     | Max       | V         |
| Maximum instantaneous forward voltage per diode at 20.0A   | $V_F$   | 0.65    | 0.70      |           |
| Maximum DC reverse current<br>at rated DC blocking voltage | $I_R$   | 30<br>3 | 100<br>20 | u A<br>mA |

**Ratings and Characteristic Curves**

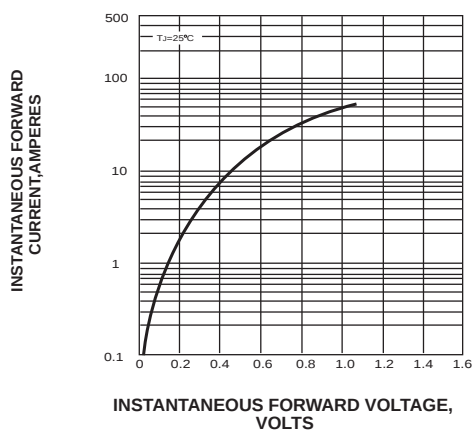
**FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT**



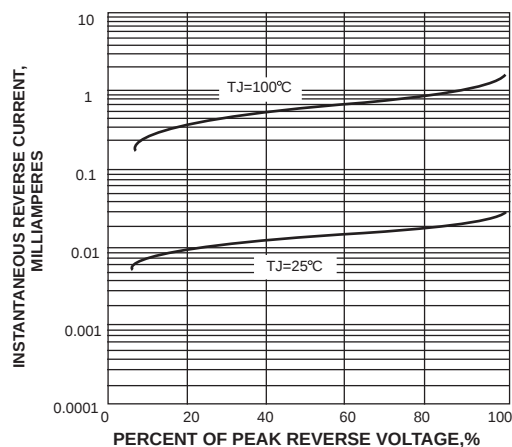
**FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG**



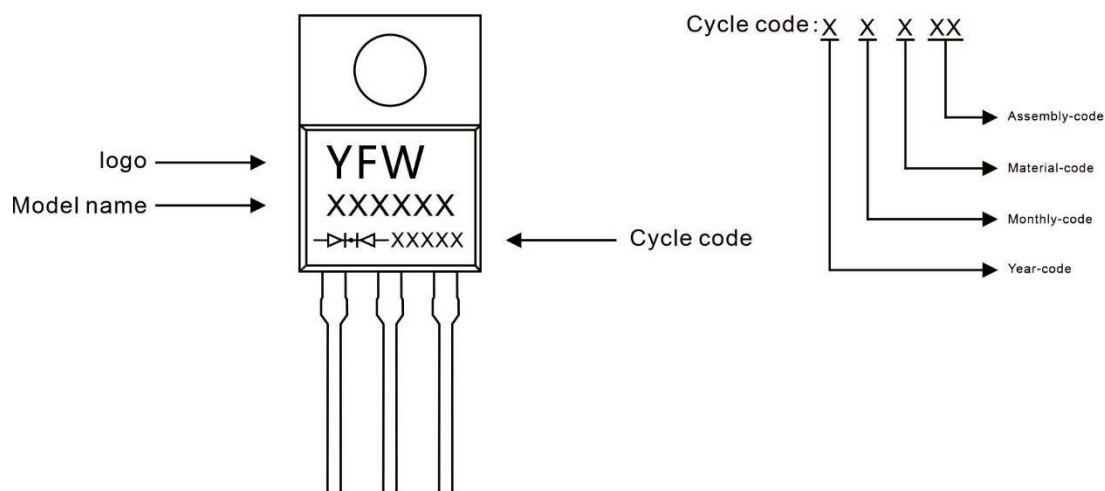
**FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS**



**FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS**



## Marking Diagram



## Ordering information

| Model name | Package  | Unit Weight   | Base Quantity | Packing Quantity           |
|------------|----------|---------------|---------------|----------------------------|
| SRT40L80CT | TO-220AB | 0.07oz(1.96g) | 50pcs/tube    | 1000PCS/Box 5000PCS/Carton |

## Package Dimensions

### TO-220AB

| Symbol | Millimeter |       | Inches |       |
|--------|------------|-------|--------|-------|
|        | Min.       | Max.  | Min.   | Max.  |
| A      | 4.30       | 4.70  | 0.169  | 0.185 |
| A1     | 2.52       | 2.82  | 0.099  | 0.111 |
| b      | 0.71       | 0.91  | 0.028  | 0.036 |
| b1     | 1.17       | 1.37  | 0.046  | 0.054 |
| c      | 0.30       | 0.50  | 0.012  | 0.020 |
| c1     | 1.17       | 1.37  | 0.046  | 0.054 |
| D      | 9.90       | 10.20 | 0.390  | 0.402 |
| E      | 8.50       | 8.90  | 0.335  | 0.350 |
| E1     | 12.00      | 12.50 | 0.472  | 0.492 |
| e      | 2.44       | 2.64  | 0.096  | 0.104 |
| e1     | 4.88       | 5.28  | 0.192  | 0.208 |
| F      | 2.60       | 2.80  | 0.102  | 0.110 |
| L      | 13.20      | 13.80 | 0.520  | 0.543 |
| L1     | 3.80       | 4.20  | 0.150  | 0.165 |
| Φ      | 3.60       | 3.96  | 0.142  | 0.156 |

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