

ULTRAFAST RECOVERY RECTIFIERS

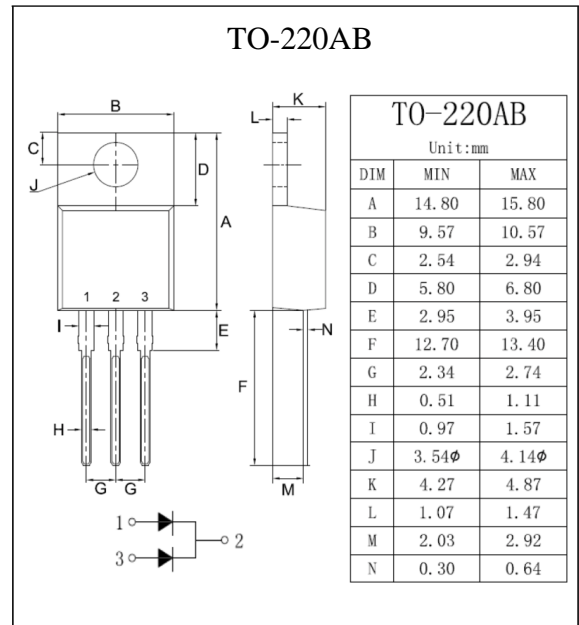
| | |
|---------|------------------|
| VOLTAGE | 100 to 600 Volts |
| CURRENT | 20 Amperes |

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0. Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability.
- High surge capability
- Ultra fast recovery time, high voltage.
- Lead free in comply with EU RoHS.

MECHANICAL DATA

- Case: TO-220AB molded plastic
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

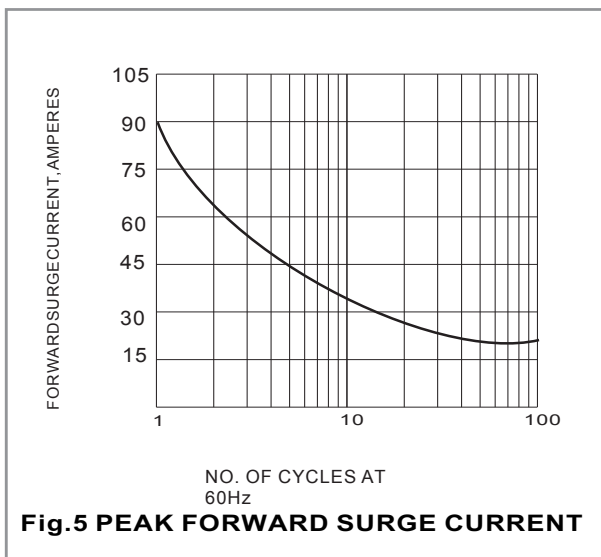
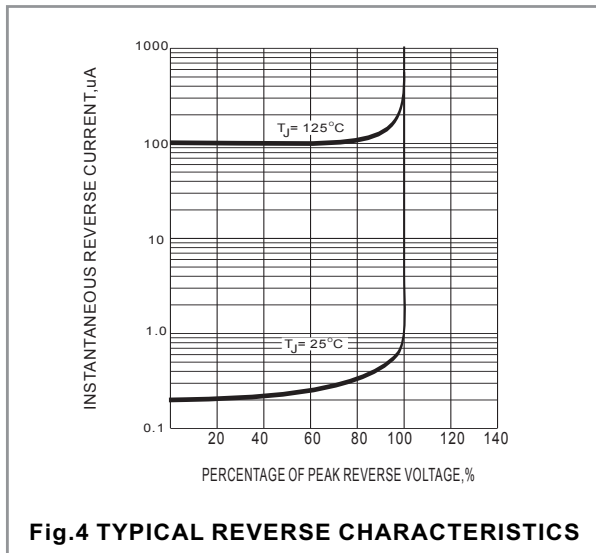
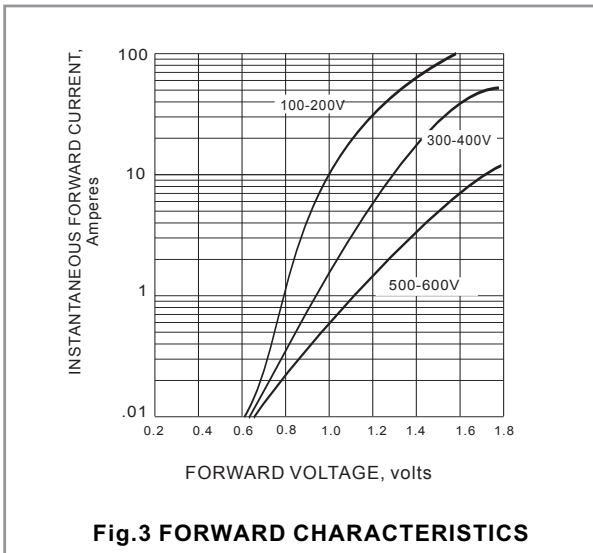
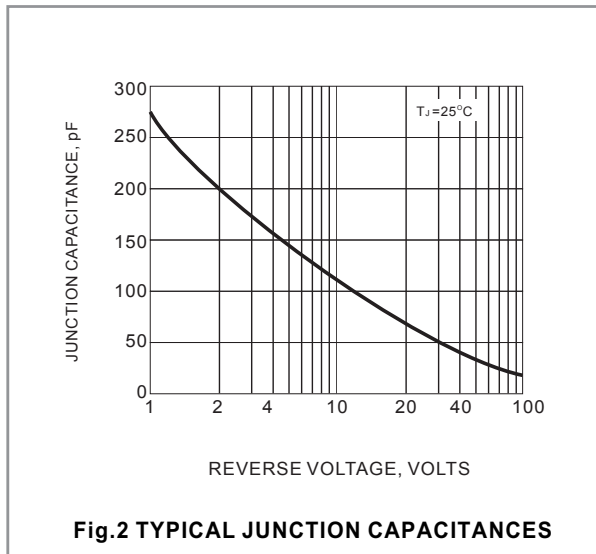
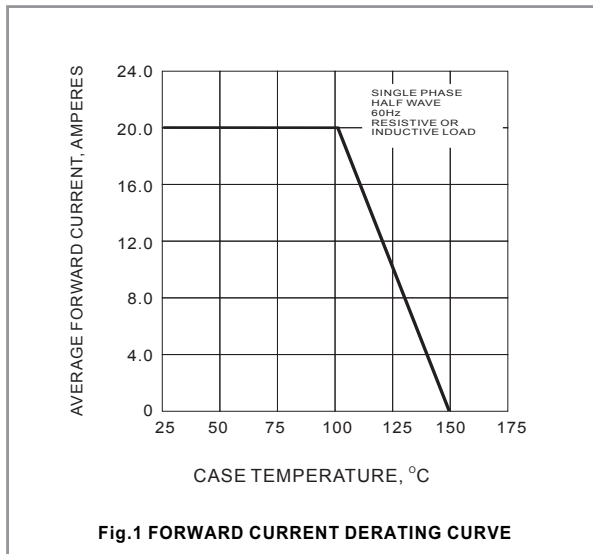
For capacitive load, derate current by 20%

| PARAMETER | SYMBOL | SF2010CT | SF2020CT | SF2030CT | SF2040CT | SF2050CT | SF2060CT | UNITS |
|--|-----------------|-------------|----------|----------|----------|----------|----------|-----------------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 100 | 200 | 300 | 400 | 500 | 600 | V |
| Maximum RMS Voltage | V_{RMS} | 70 | 140 | 210 | 280 | 350 | 420 | V |
| Maximum DC Blocking Voltage | V_{DC} | 100 | 200 | 300 | 400 | 500 | 600 | V |
| Maximum Average Forward Current at $T_C = 100^\circ\text{C}$ | $I_{F(AV)}$ | 20 | | | | | | A |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 110 | | | | | | A |
| Maximum Forward Voltage at 10A | V_F | 1 | 1.3 | | 1.7 | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$ | I_R | 10 | | | | 500 | | μA |
| Typical Junction Capacitance (Note 1) | C_J | 200 | | | | | | pF |
| Maximum Reverse Recovery Time (Note 2) | t_{rr} | 35 | | | | | | ns |
| Typical Thermal Resistance (Note 3) | $R_{\theta JC}$ | 3 | | | | | | $^\circ\text{C} / \text{W}$ |
| Operating Junction and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | | | | | $^\circ\text{C}$ |

NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.
3. Thermal resistance from Junction to case.

RATING AND CHARACTERISTIC CURVES



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