

DATA SHEET

FAST RECOVERY RECTIFIERS

VOLTAGE 200 Volts

CURRENT 12.0 Amperes

TO-220AB

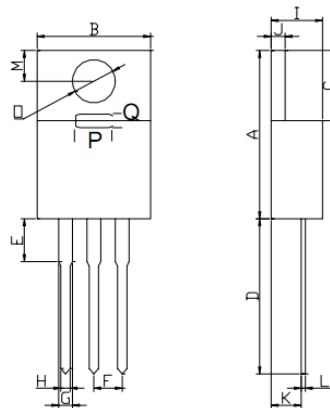
Unit:mm

FEATURES

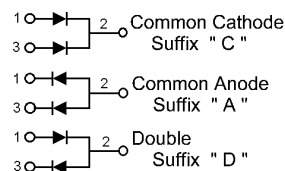
- Low Forward Voltage.
- Low Reverse Leakage Current.
- Fast Switching for High Efficiency.
- Low Forward Voltage , High Current Capability.

MECHANICAL DATA

- Case: TO-220AB Molded Plastic
- Polarity: Symbols molded or marked on body
- Mounting position : Any



| DIM | MILLIMETERS | |
|-----|-------------|-------|
| | MIN | MAX |
| A | 14.68 | 15.32 |
| B | 9.78 | 10.42 |
| C | 6.01 | 6.52 |
| D | 13.06 | 14.62 |
| E | 3.57 | 4.07 |
| F | 2.42 | 2.66 |
| G | 1.12 | 1.35 |
| H | 0.72 | 0.96 |
| I | 4.22 | 4.98 |
| J | 1.14 | 1.36 |
| K | 2.20 | 2.97 |
| L | 0.33 | 0.55 |
| M | 2.48 | 2.98 |
| O | 3.70 | 3.90 |
| P | 3.50 | 3.70 |
| Q | 1.20 | 1.40 |



In compliance with EU RoHs 2002/95/EC directives

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| Characteristic | Symobl | F12C20CT | Unit |
|--|--------|-----------|------|
| Peak Repetitive Reverse Voltage | VRRM | | |
| Working Peak Reverse Voltage | VRWM | 200 | V |
| DC Blocking Voltage | VR | | |
| Maximum RMS Voltage | VRMS | 140 | V |
| Maximum Average Forward Rectified Current | I (AV) | 12 | A |
| Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz) | IFSM | 100 | A |
| Maximum forward voltage | VF | 1.3 | V |
| Maximum DC Reverse Current @TC=25°C | IR | 5 | uA |
| at Rated DC Blocking Voltage @TC=125°C | | 100 | |
| Operating Temperature Range | TJ | -65to+150 | °C |
| Storage Temperature Range | TSTG | -65to+150 | °C |
| Reverse Recovery Time (IF = 0.5 A, IR=1.0A , Irr=0.25 A) | TRR | 150 | NS |
| Typical Junction Capacitance (Reverse Voltage of 4 volts & f=1 MHz) | Cp | 55 | PF |

FIG-1 TYPICAL FORWARD CHARACTERISTICS

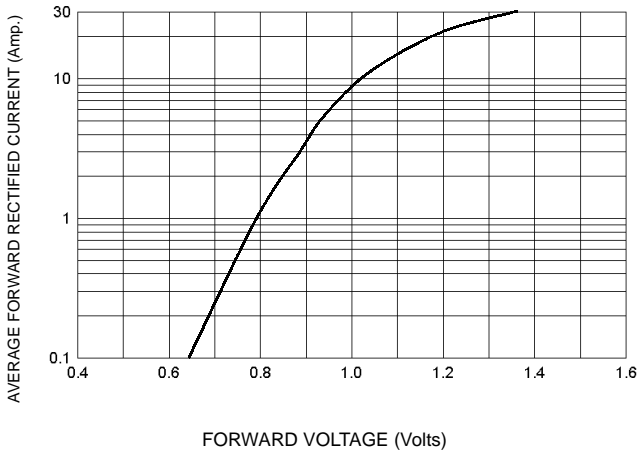


FIG-2 TYPICAL REVERSE CHARACTERISTICS

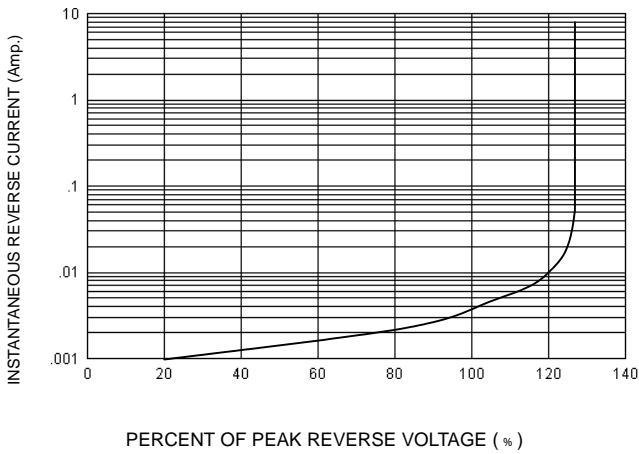


FIG-3 FORWARD CURRENT DERATING CURVE

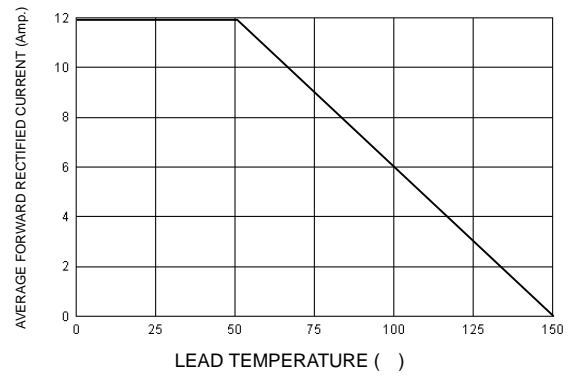


FIG-4 TYPICAL JUNCTION CAPACITANCE

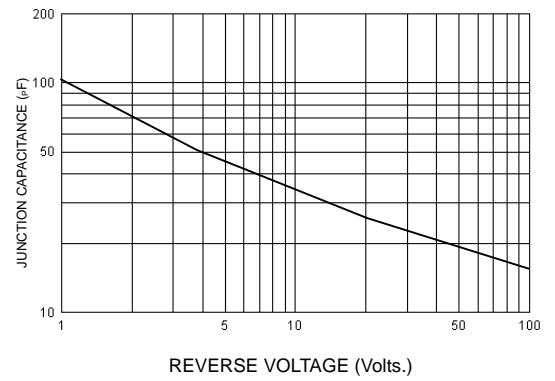
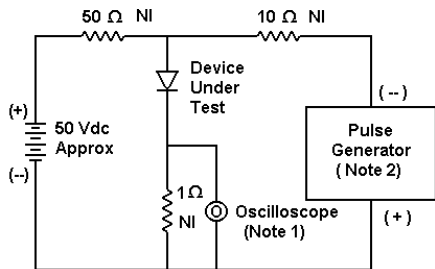
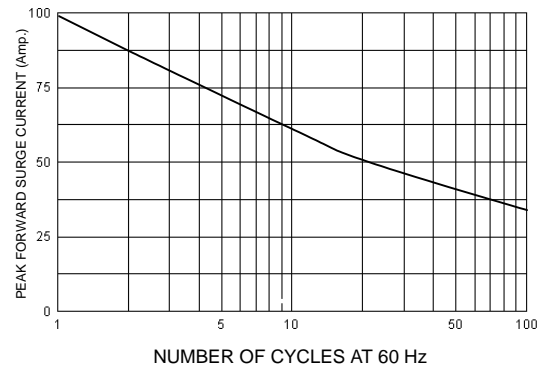
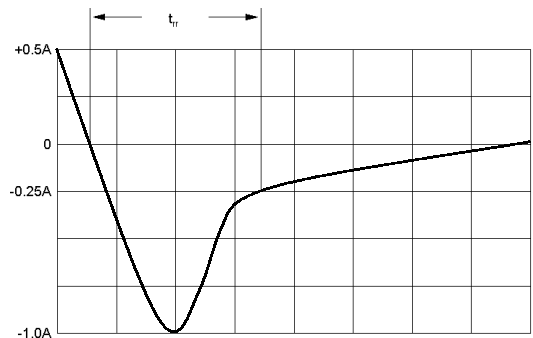


FIG-5 PEAK FORWARD SURGE CURRENT



- Notes:
 1. Rise Time = 7 ns max. Input Impedance = 1 M Ω, 22 pF
 2. Rise Time = 10 ns max. Input Impedance = 50 Ω



Set time base for 20/50 ns/cm

FIG-6 Reverse Recovery Time Characteristic and Test Circuit Diagram