

**SUPER FAST
GLASS PASSIVATED RECTIFIERS**

REVERSE VOLTAGE - 100 to 200 Volts
FORWARD CURRENT - 20 Amperes

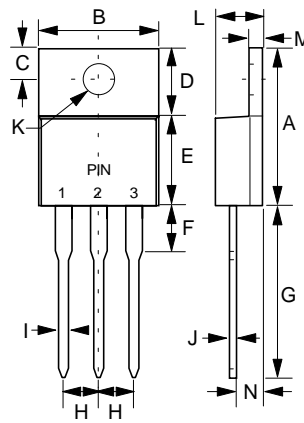
FEATURES

- Glass passivated chip
- Superfast switching time for high efficiency
- Low forward voltage drop and high current capability
- Low reverse leakage current
- High surge capacity
- Plastic package has UL flammability classification 94V-0

MECHANICAL DATA

- Case : TO-220AB molded plastic
- Polarity : As marked on the body
- Weight : 0.08 ounces, 2.24 grams
- Mounting position : Any

TO-220AB



| TO-220AB | | |
|----------|--------------------|--------------------|
| DIM. | MIN. | MAX. |
| A | 14.22 | 15.88 |
| B | 9.65 | 10.67 |
| C | 2.54 | 3.43 |
| D | 5.84 | 6.86 |
| E | 8.26 | 9.28 |
| F | - | 6.35 |
| G | 12.70 | 14.73 |
| H | 2.29 | 2.79 |
| I | 0.51 | 1.14 |
| J | 0.30 | 0.64 |
| K | 3.53 \varnothing | 4.09 \varnothing |
| L | 3.56 | 4.83 |
| M | 1.14 | 1.40 |
| N | 2.03 | 2.92 |

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

| CHARACTERISTICS | SYMBOL | STPR2010CT | STPR2020CT | UNIT |
|--|----------------------------------|----------------------------|------------|------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 100 | 200 | V |
| Maximum RMS Voltage | V _{RMS} | 70 | 140 | V |
| Maximum DC Blocking Voltage | V _{DC} | 100 | 200 | V |
| Maximum Average Forward Rectified Current @T _C =95°C | I _(AV) | 20 | | A |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD) | I _{FSM} | 125 | | A |
| Maximum forward Voltage at IF=10A @T _J =25°C IF=10A @T _J =125°C Pulse width =300us 2% Duty cycle IF=20A @T _J =25°C IF=20A @T _J =125°C | V _F | 1.1 1.0 1.25 1.20 | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage @T _J =25°C @T _J =100°C | I _R | 5 100 | | uA |
| Typical Junction Capacitance per element (Note 1) | C _J | 100 | | pF |
| Maximum Reverse Recovery Time (Note 2) | T _{RR} | 35 | | ns |
| Typical Thermal Resistance (Note 3) | R _{θJC} | 1.5 | | °C/W |
| Operating and Storage Temperature Range | T _J ,T _{STG} | -55 to +150 | | °C |

NOTES : 1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2.Reverse Recovery Test Conditions:IF=0.5A,IR=1.0A,IRR 0.25A.
3.Thermal Resistance Junction to Case.

FIG.1 - FORWARD CURRENT DERATING CURVE

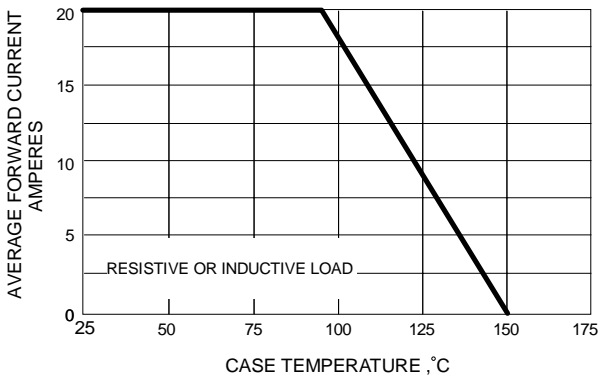


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

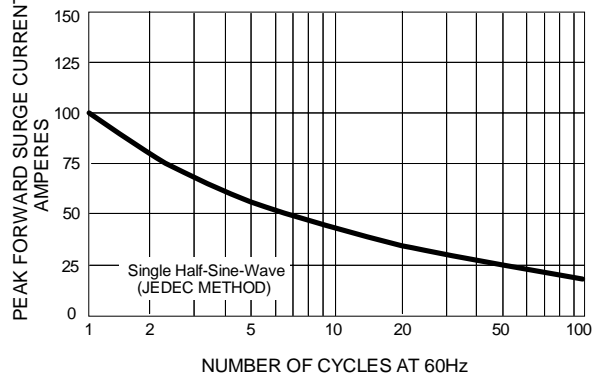


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

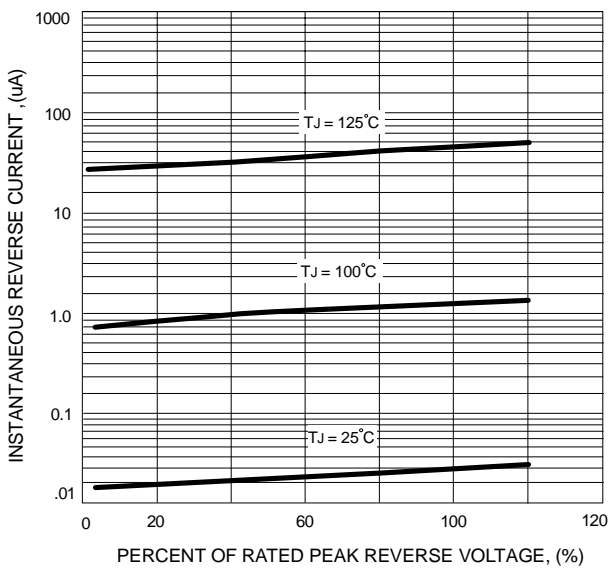


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

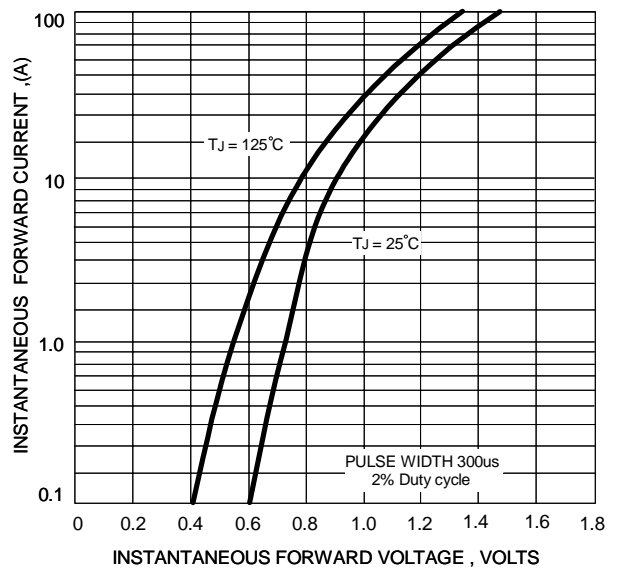


FIG.5 - TYPICAL JUNCTION CAPACITANCE

