

**SUPER FAST
GLASS PASSIVATED RECTIFIERS**

REVERSE VOLTAGE - **100 to 200** Volts
FORWARD CURRENT - **8.0** Amperes

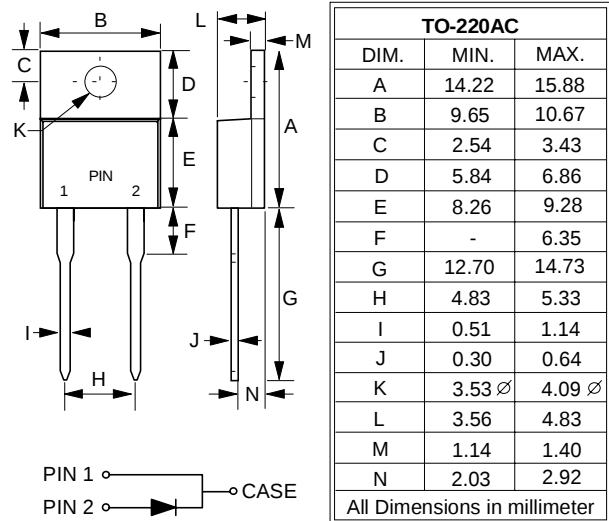
FEATURES

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

TO-220AC



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	STPR810D	STPR820D	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 @ $T_C=120^\circ\text{C}$	$I_{(AV)}$	8.0		A
Non Repetitive Peak Forward Surge Current Per Diode Sinusoidal (JEDEC Method) $T_P=10\text{ms}$ $T_P=8.3\text{ms}$	I_{FSM}	80 90		A
Maximum forward Voltage $I_F=8\text{A}$ @ $T_J=125^\circ\text{C}$ Pulse Width =300us $I_F=16\text{A}$ @ $T_J=125^\circ\text{C}$ Duty cycle $I_F=16\text{A}$ @ $T_J=25^\circ\text{C}$	V_F	0.99 1.20 1.25		V
Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_J=100^\circ\text{C}$	I_R	50 600		uA
Typical Junction Capacitance (Note 1)	C_J	80		pF
Maximum Reverse Recovery Time (Note 2)	T_{RR}	30		ns
Typical Thermal Resistance	$R_{\theta JC}$	3.0		°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: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR} 0.25\text{A}$.

REV. 3, 13-Sep-2001, KTGA05

FIG.1 - FORWARD CURRENT DERATING CURVE

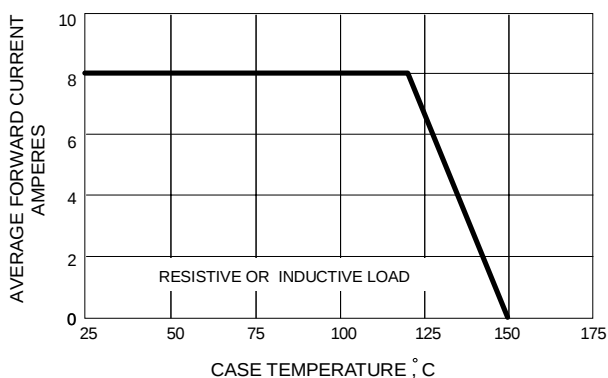


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

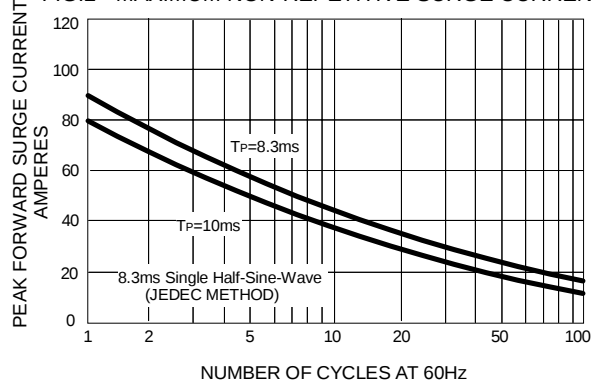


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

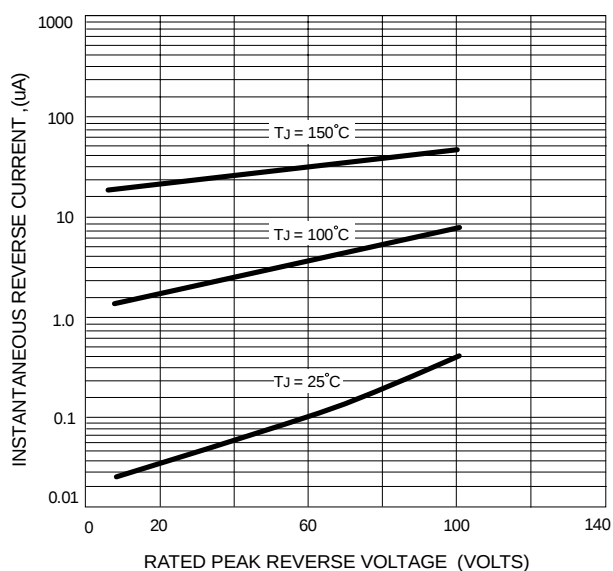


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

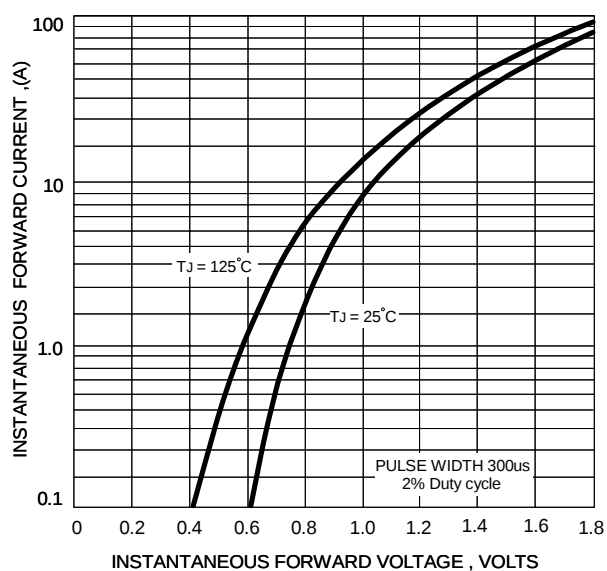


FIG.5 - TYPICAL JUNCTION CAPACITANCE

