

**SUPER FAST  
GLASS PASSIVATED RECTIFIERS**

REVERSE VOLTAGE - **100 to 600** Volts  
FORWARD CURRENT - **10** Amperes

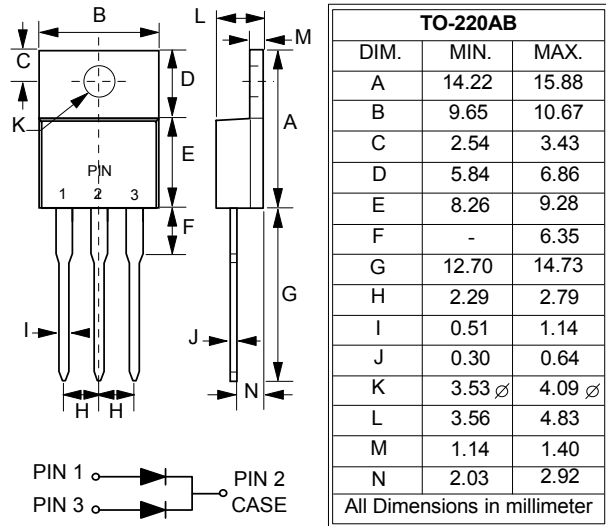
**FEATURES**

- 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
- Max. mounting torque = 0.5 N.m (5.1 Kgf.cm)

**TO-220AB**



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	STPR 1010CT	STPR 1020CT	STPR 1030CT	STPR 1040CT	STPR 1050CT	STPR 1060CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	100	200	300	400	500	600	V
Maximum RMS Voltage	V <sub>RMS</sub>	70	140	210	280	350	420	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	100	200	300	400	500	600	V
Maximum Average Forward Rectified Current @T <sub>C</sub> =125°C	I <sub>(AV)</sub>	10						A
Non Repetitive Peak Forward Surge Current Per Diode Sinusoidal T <sub>P</sub> =8.3ms	I <sub>FSM</sub>	55						A
Maximum forward Voltage IF=5A@T <sub>J</sub> =25°C Pulse Width =300us Duty cycle IF=10A@T <sub>J</sub> =25°C IF=10A@T <sub>J</sub> =125°C	V <sub>F</sub>	1.1 1.0 1.25 1.20		1.3 1.2 1.5 1.4		1.5 1.4 1.7 1.6		V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T <sub>J</sub> =25°C @T <sub>J</sub> =100°C	I <sub>R</sub>	10 250						uA
Typical Junction Capacitance per element (Note 1)	C <sub>J</sub>	80						pF
Maximum Reverse Recovery Time (Note 2)	T <sub>RR</sub>	30		35		50		ns
Typical Thermal Resistance	R <sub>θ JC</sub>	4.0						°C/W
Operating and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-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.

REV. 2, Sep-2010, KTGC10

FIG.1 - FORWARD CURRENT DERATING CURVE

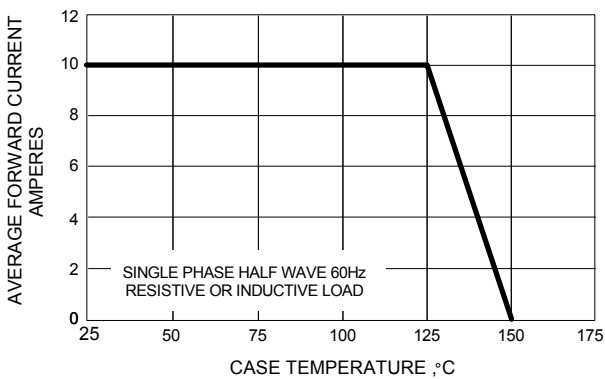


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

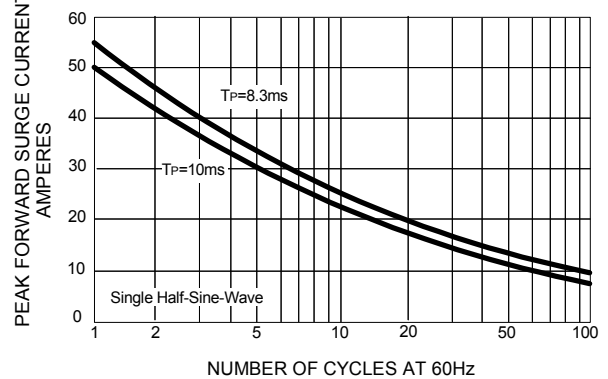


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

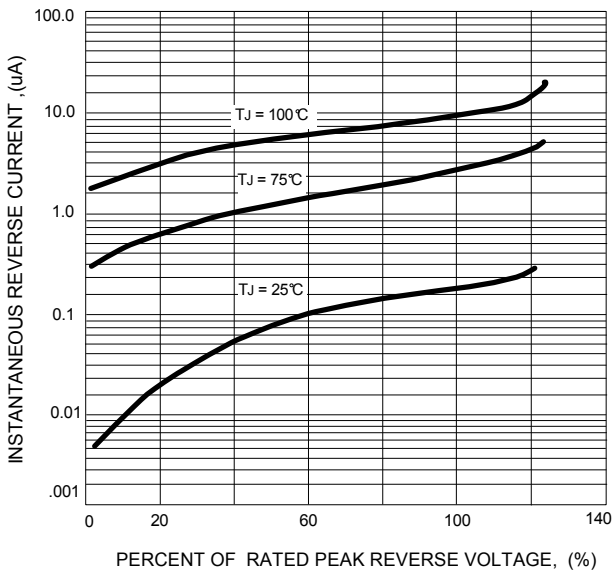


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

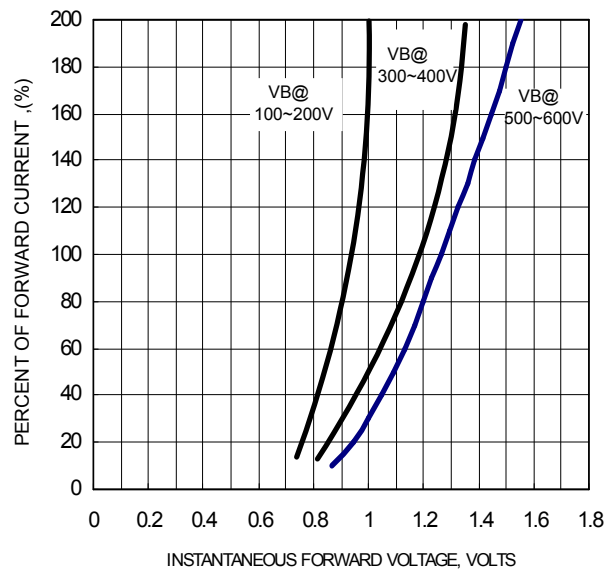


FIG.5 - TYPICAL JUNCTION CAPACITANCE

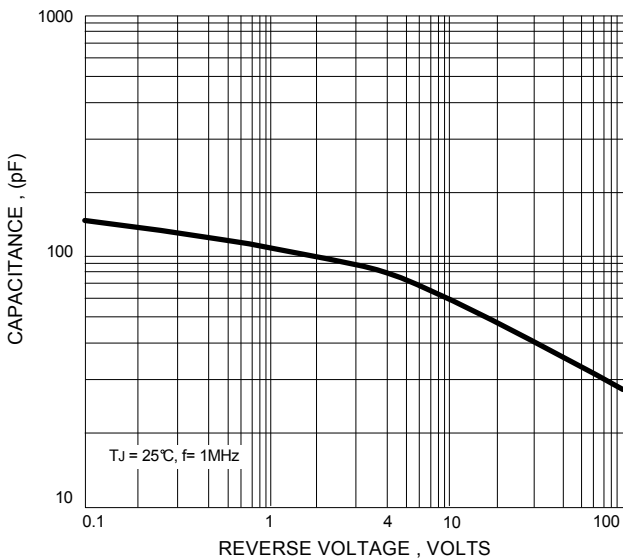
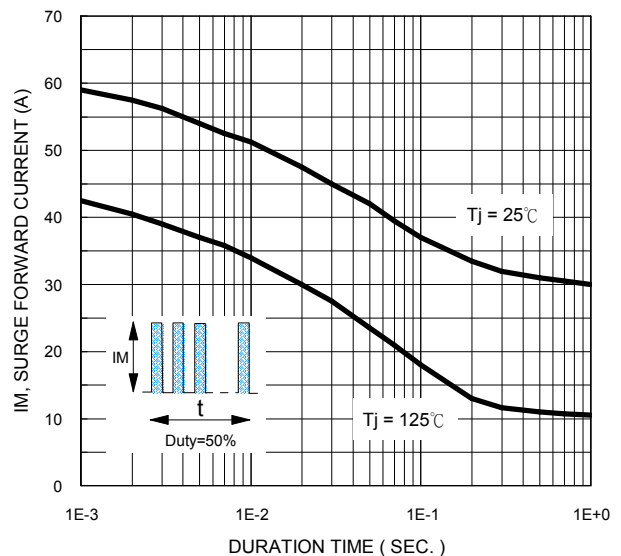


FIG.6 - MAXIMUM NON REPETITIVE SURGE PEAK FORWARD CURRENT VERSUS OVERLOAD DURATION PER DIODE



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