

**SUPER FAST  
GLASS PASSIVATED RECTIFIERS**

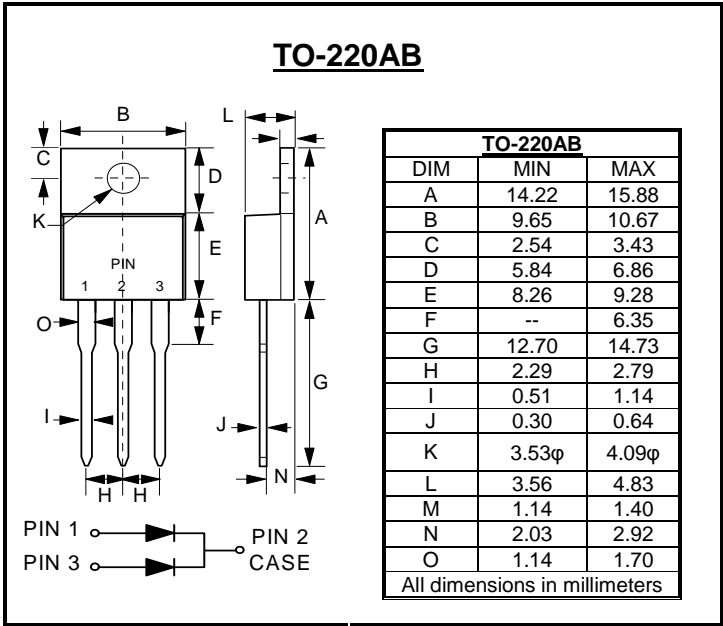
**REVERSE VOLTAGE – 500 to 600 Volts  
FORWARD CURRENT – 10 Amperes**

**FEATURES**

- Glass passivated chip
- Super fast switching time for high efficiency
- Low forward voltage drop and high current capability
- Low reverse leakage current
- High surge capacity

**MECHANICAL DATA**

- Case :TO-220AB molded plastic
- Case Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free"
- Polarity : As marked on the body
- Wight : 0.072 ounces,2.0275grams(Approximate)
- Mounting position : Any
- Lead free finish, RoHS compliant
- Max. mounting torque=0.5N.m(5.1Kgf.cm)



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**  
Ratings at 25°C ambient temperature unless otherwise specified.

**ABSOLUTE RATINGS**

Marking Code PARAMETER	SYMBOL	STPR1050CT	STPR1060CT	UNIT
		VALUE		
Maximum repetitive peak reverse voltage	$V_{RRM}$	500	600	V
Maximum DC blocking voltage	$V_{DC}$	500	600	V
Maximum Average rectified output current @ $T_C = 125^\circ C$	$I_{(AV)}$	10		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	$I_{FSM}$	55		A
Operating and Storage temperature range	$T_J, T_{STG}$	-55 to +150		°C

**STATIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Forward voltage (Note1)	$I_F=5A$	$V_F$	$T_J=25^\circ C$	1.50
			$T_J=125^\circ C$	1.40
	$I_F=10A$	$V_F$	$T_J=25^\circ C$	1.70
			$T_J=125^\circ C$	1.60
Maximum DC Reverse current at Rate DC Blocking Voltage	$T_J=25^\circ C$ $T_J=100^\circ C$	$I_R$	10 250	uA
Typical junction capacitance (Note2)		$C_j$	80	pF

**THERMAL CHARACTERISTICS**

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance	$R_{thJc}$	4.0	°C/W

**DYNAMIC ELECTRICAL CHARACTERISTICS**

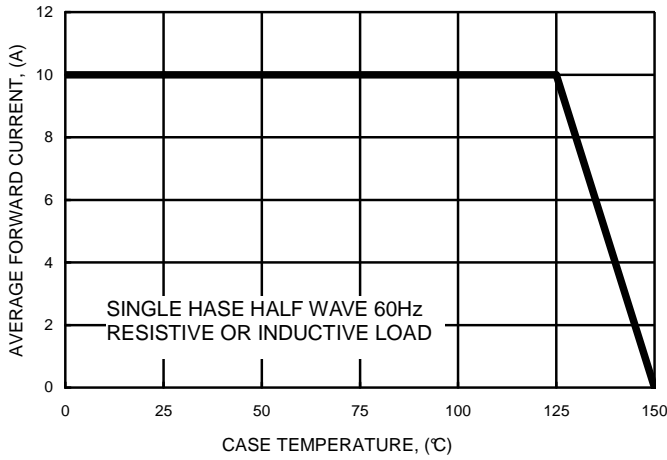
PARAMETER	TEST CONDITIONS	SYMBOL	MAX	UNIT
Reverse recovery time	$I_F=0.5A, I_{rr}=0.25A, I_R=1A$	$T_{rr}$	50	nS

**Note :**  
 (1) 300us pulse width, 2% duty cycle.  
 (2) Measured at 1.0MHz and applied reverse voltage of 4.0 VDC

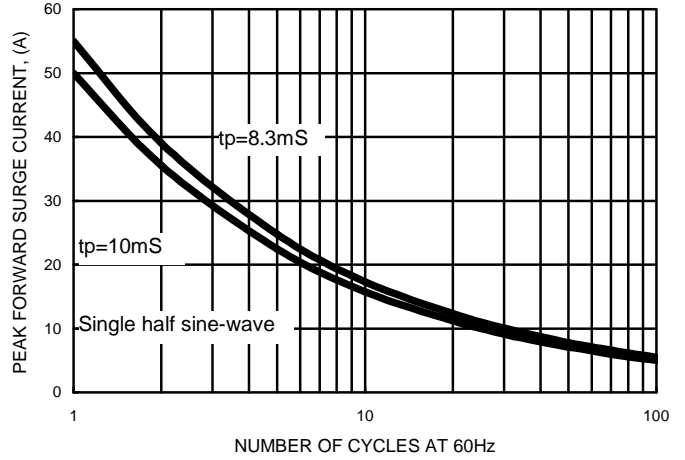
**RATING AND CHARACTERISTIC CURVES**  
**STPR1050CT thru 1060CT**



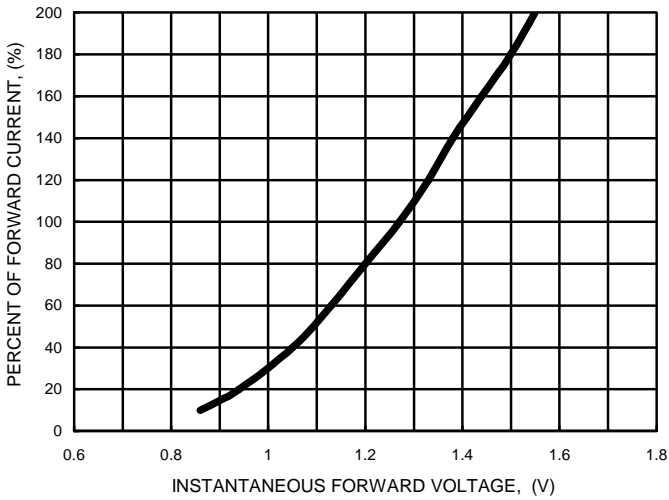
**FIG.1- FORWARD CURRENT DERATING CURVE**



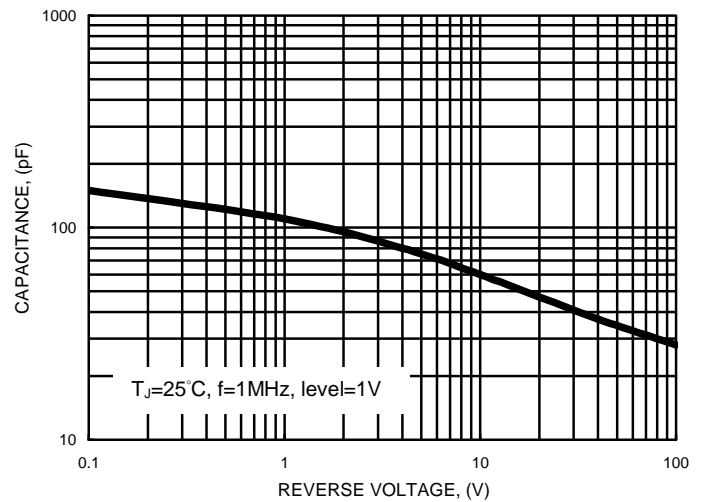
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



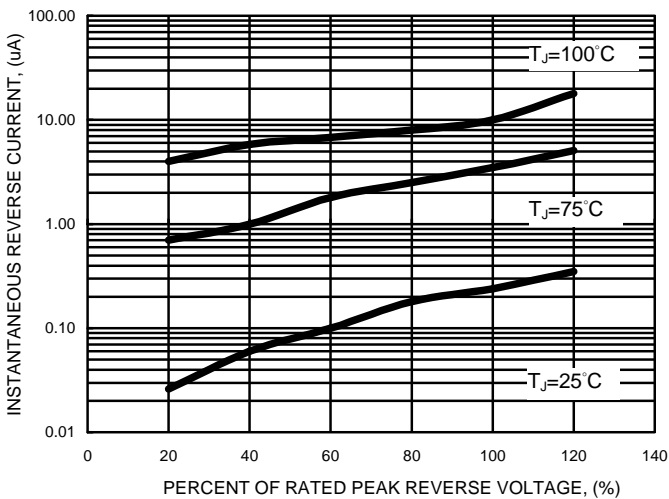
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



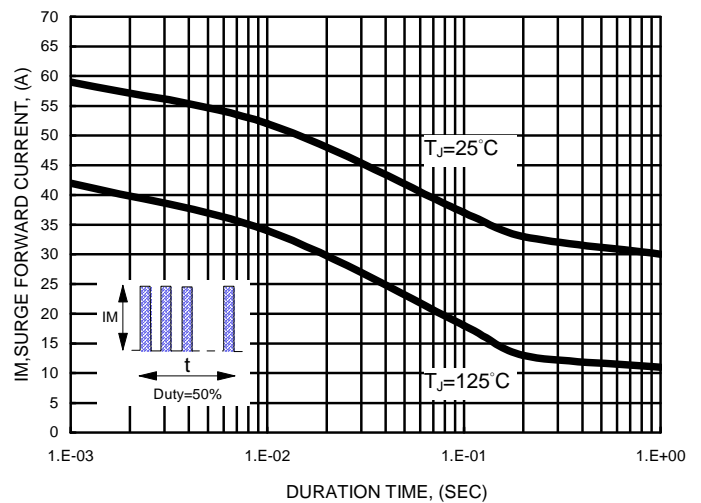
**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



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



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