

**SUPER FAST  
GLASS PASSIVATED RECTIFIERS**

REVERSE VOLTAGE - 100 to 600 Volts  
FORWARD CURRENT - 5.0 Amperes

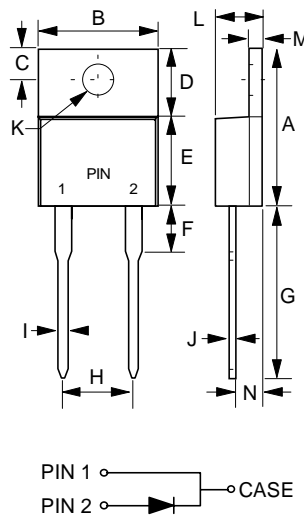
**FEATURES**

- 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**



TO-220AC		
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	4.83	5.33
I	0.51	1.14
J	0.30	0.64
K	3.53 ∅	4.09 ∅
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	STPR 510D	STPR 520D	STPR 530D	STPR 540D	STPR 550D	STPR 560D	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	100	200	300	400	500	600	V
Maximum RMS Voltage	VRMS	70	140	210	280	350	420	V
Maximum DC Blocking Voltage	VDC	100	200	300	400	500	600	V
Maximum Average Forward Rectified Current @TC=100°C	I(AV)	5						A
Non Repetitive Peak Forward Surge Current Per Diode Sinusoidal (JEDEC Method) TP=8.3ms	IFSM	55						A
Maximum Forward Voltage at 5.0A DC @TJ=25°C @TJ=125°C	VF	1.1 1.0		1.3 1.2		1.5 1.4		V
Maximum DC Reverse Current at Rated DC Blocking Voltage @TJ=25°C @TJ=125°C	IR	10 500						uA
Typical Junction Capacitance (Note 1)	CJ	78						pF
Maximum Reverse Recovery Time (Note 2)	T <sub>RR</sub>	30		35		50		ns
Typical Thermal Resistance (Note 3)	R <sub>θJC</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: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A.  
3. Thermal Resistance Junction to case.

FIG.1 - FORWARD CURRENT DERATING CURVE

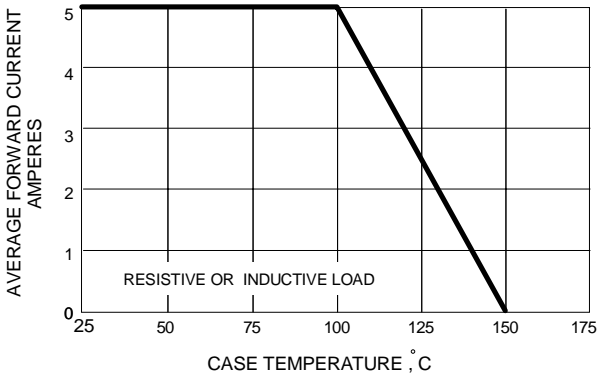


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

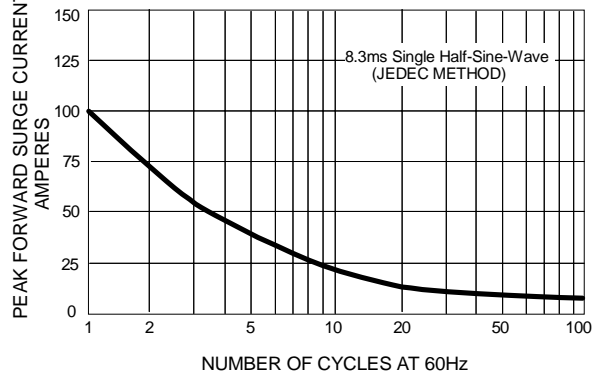


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

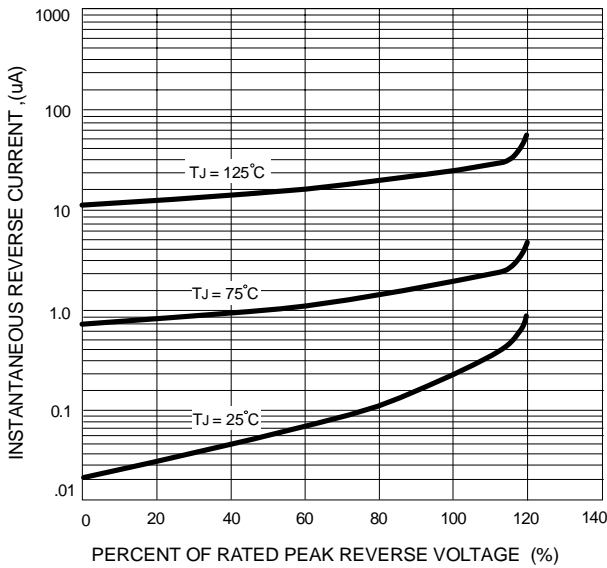


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

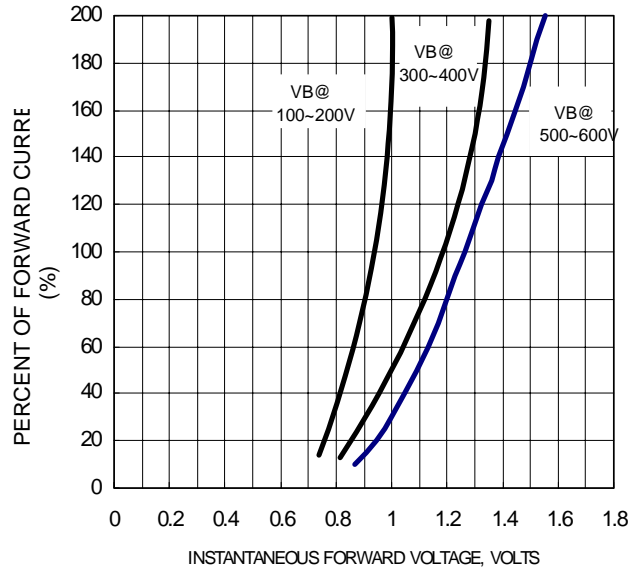


FIG.5 - TYPICAL JUNCTION CAPACITANCE

