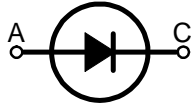
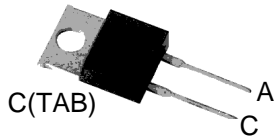


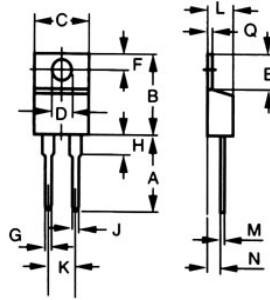
# STPR506D

## Ultra Fast Recovery Diodes



A=Anode, C=Cathode, TAB=Cathode

Dimensions TO-220AC



Dim.	Inches		Millimeter	
	Min.	Max.	Min.	Max.
A	0.500	0.580	12.70	14.73
B	0.560	0.650	14.23	16.51
C	0.380	0.420	9.66	10.66
D	0.139	0.161	3.54	4.08
E	2.300	0.420	5.85	6.85
F	0.100	0.135	2.54	3.42
G	0.045	0.070	1.15	1.77
H	-	0.250	-	6.35
J	0.025	0.035	0.64	0.89
K	0.190	0.210	4.83	5.33
L	0.140	0.190	3.56	4.82
M	0.015	0.022	0.38	0.56
N	0.080	0.115	2.04	2.49
Q	0.025	0.055	0.64	1.39

	V <sub>RRM</sub>	V <sub>RMS</sub>	V <sub>DC</sub>
	V	V	V
<b>STPR506D</b>	600	420	600

Symbol	Characteristics	Maximum Ratings	Unit
I <sub>AV</sub>	Maximum Average Forward Rectified Current @T <sub>c</sub> =100°C	5.0	A
I <sub>FSM</sub>	Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)	100	A
V <sub>F</sub>	Maximum Forward Voltage At 5.0A DC	1.75	V
I <sub>R</sub>	Maximum DC Reverse Current @T <sub>J</sub> =25°C At Rated DC Blocking Voltage @T <sub>J</sub> =125°C	5 500	uA
C <sub>J</sub>	Typical Junction Capacitance (Note 1)	60	pF
T <sub>RR</sub>	Maximum Reverse Recovery Time (Note 2)	25	ns
R <sub>θJC</sub>	Typical Thermal Resistance (Note 3)	3.0	°C/W
T <sub>J</sub> , T <sub>STG</sub>	Operating And Storage Temperature Range	-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.

### 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

### MECHANICAL DATA

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



# STPR506D

## Ultra Fast Recovery Diodes

FIG.1 - FORWARD CURRENT DERATING CURVE

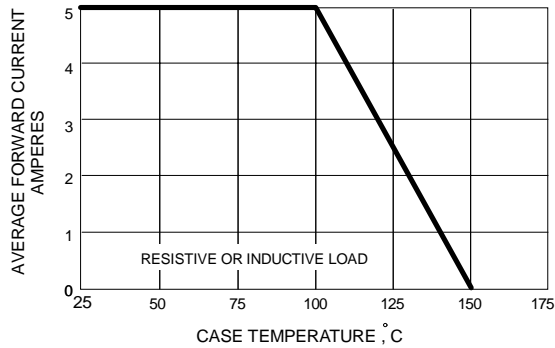


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

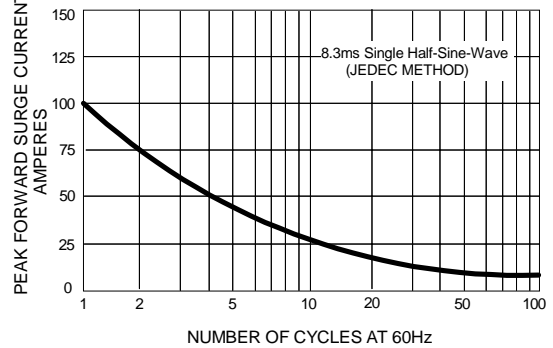


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

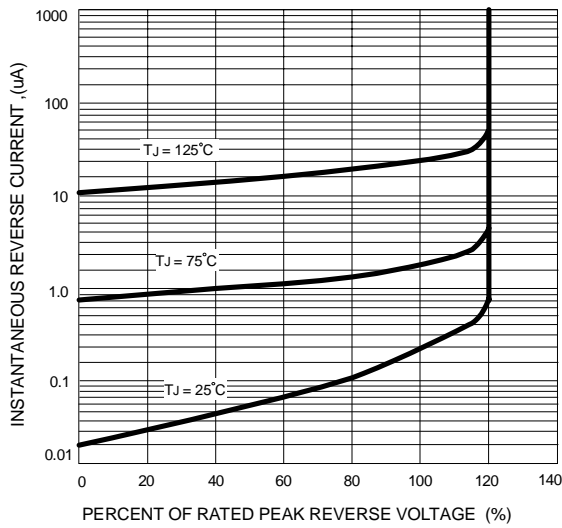


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

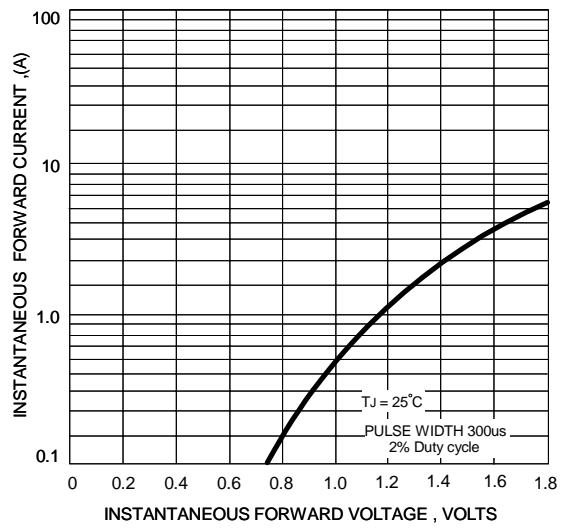


FIG.5 - TYPICAL JUNCTION CAPACITANCE

