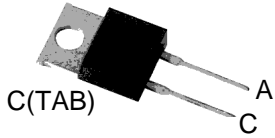


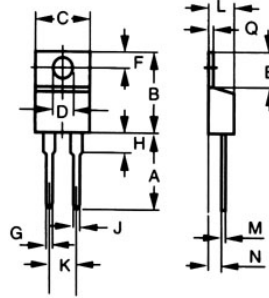
# STPR502D

## 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

	$V_{RRM}$	$V_{RMS}$	$V_{DC}$
	V	V	V
<b>STPR502D</b>	200	140	200

Symbol	Characteristics	Maximum Ratings	Unit
$I_{AV}$	Maximum Average Forward Rectified Current @ $T_c=100^\circ\text{C}$	5.0	A
$I_{FSM}$	Non Repetitive Peak Forward Surge Current Per Diode Sinusoidal (JEDEC METHOD) $T_P=8.3\text{ms}$	100	A
$V_F$	Maximum Forward Voltage At 5.0A DC	0.90	V
$I_R$	Maximum DC Reverse Current At Rated DC Blocking Voltage @ $T_J=25^\circ\text{C}$ @ $T_J=125^\circ\text{C}$	5 500	$\mu\text{A}$
$C_J$	Typical Junction Capacitance (Note 1)	78	pF
$T_{RR}$	Maximum Reverse Recovery Time (Note 2)	25	ns
$R_{\theta JC}$	Typical Thermal Resistance (Note 3)	4.0	$^\circ\text{C/W}$
$T_J, T_{STG}$	Operating And Storage Temperature Range	-55 to +150	$^\circ\text{C}$

NOTES: 1. Measured At 1.0MHz And Applied Reverse Voltage Of 4.0V DC.  
2. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$ .  
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



# STPR502D

## Ultra Fast Recovery Diodes

FIG.1 - FORWARD CURRENT DERATING CURVE

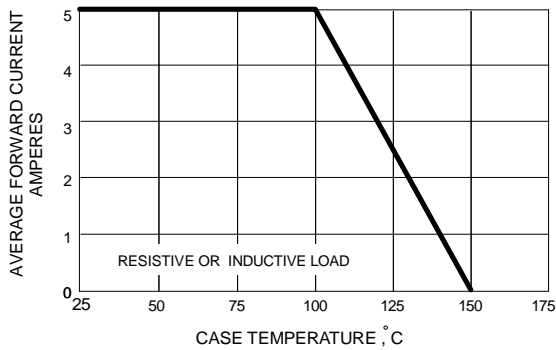


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

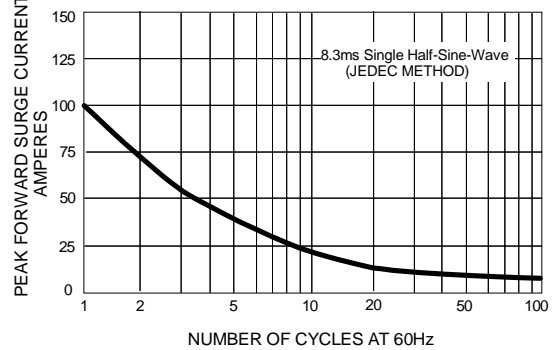


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

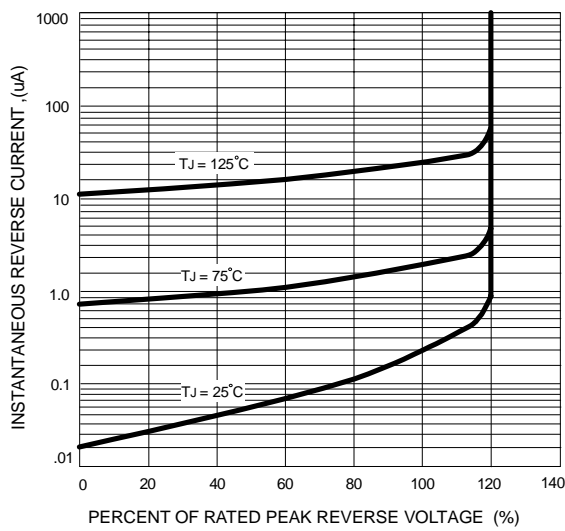


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

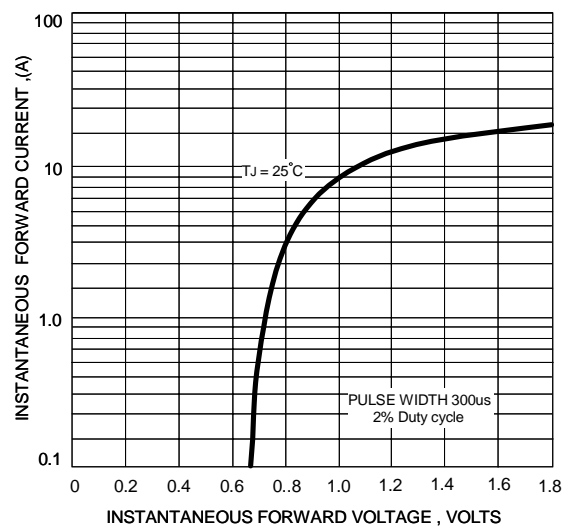


FIG.5 - TYPICAL JUNCTION CAPACITANCE

