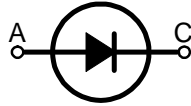
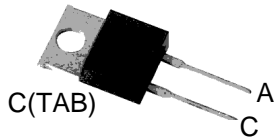


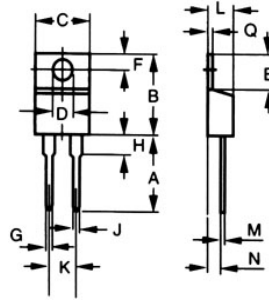
STPR810D thru STPR820D

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
STPR810D	100	70	100
STPR820D	200	140	200

Symbol	Characteristics	Maximum Ratings	Unit
I_{AV}	Maximum Average Forward Rectified Current @ $T_c=120^\circ\text{C}$	8.0	A
I_{FSM}	Non Repetitive Peak Forward Surge Current Per Diode Sinusoidal (JEDEC METHOD) $T_P=10\text{ms}$ $T_P=8.3\text{ms}$	80 90	A
V_F	Maximum Forward Voltage Pulse Width=300us Duty Cycle $I_F=8\text{A}$ @ $T_J=125^\circ\text{C}$ $I_F=16\text{A}$ @ $T_J=125^\circ\text{C}$ $I_F=16\text{A}$ @ $T_J=25^\circ\text{C}$	0.99 1.20 1.25	V
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_J=25^\circ\text{C}$ @ $T_J=100^\circ\text{C}$	50 600	μA
C_J	Typical Junction Capacitance (Note 1)	80	pF
T_{RR}	Maximum Reverse Recovery Time (Note 2)	30	ns
$R_{\theta JC}$	Typical Thermal Resistance	3.0	$^\circ\text{C}/\text{W}$
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: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$.

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



STPR810D thru STPR820D

Ultra Fast Recovery Diodes

FIG.1 - FORWARD CURRENT DERATING CURVE

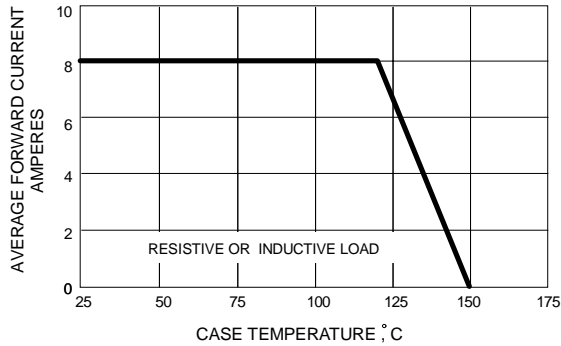


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

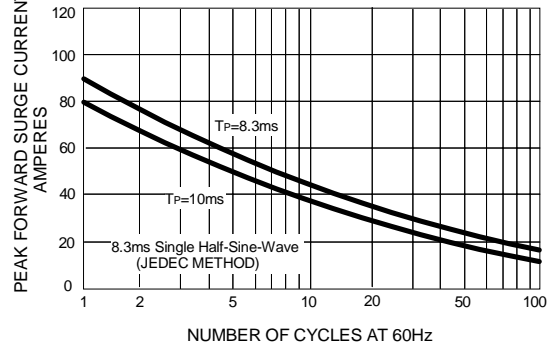


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

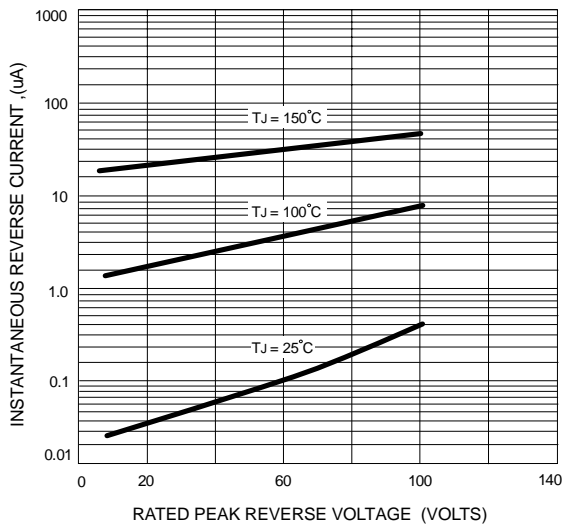


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

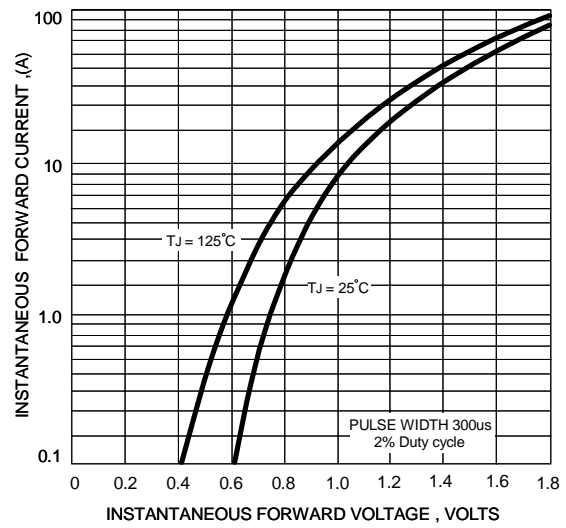


FIG.5 - TYPICAL JUNCTION CAPACITANCE

