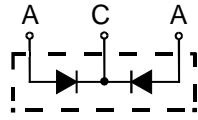
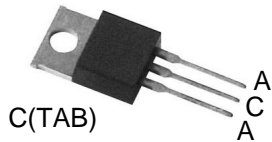


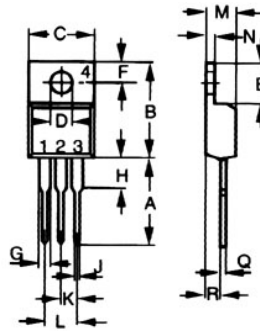
# STPR1010CT thru STPR1020CT

## Ultra Fast Recovery Diodes



A=Anode, C=Cathode, TAB=Cathode

Dimensions TO-220AB



Dim.	Inches		Millimeter	
	Min.	Max.	Min.	Max.
A	0.500	0.550	12.70	13.97
B	0.580	0.630	14.73	16.00
C	0.390	0.420	9.91	10.66
D	0.139	0.161	3.54	4.08
E	0.230	0.270	5.85	6.85
F	0.100	0.125	2.54	3.18
G	0.045	0.065	1.15	1.65
H	0.110	0.230	2.79	5.84
J	0.025	0.040	0.64	1.01
K	0.100	BSC	2.54	BSC
M	0.170	0.190	4.32	4.82
N	0.045	0.055	1.14	1.39
Q	0.014	0.022	0.35	0.56
R	0.090	0.110	2.29	2.79

	V <sub>RRM</sub>	V <sub>RMS</sub>	V <sub>DC</sub>
	V	V	V
STPR1010CT	100	70	100
STPR1020CT	200	140	200

Symbol	Characteristics	Maximum Ratings	Unit
I <sub>(AV)</sub>	Maximum Average Forward Rectified Current @T <sub>c</sub> =125°C	10	A
I <sub>FSM</sub>	Non Repetitive Peak Forward Surge Current Per Diode Sinusoidal (JEDEC METHOD) T <sub>P</sub> =10ms T <sub>P</sub> =8.3ms	50 55	A
V <sub>F</sub>	Maximum Forward Voltage Pulse Width=300us Duty Cycle I <sub>F</sub> =5A @T <sub>J</sub> =25°C I <sub>F</sub> =5A @T <sub>J</sub> =125°C I <sub>F</sub> =10A @T <sub>J</sub> =25°C I <sub>F</sub> =10A @T <sub>J</sub> =125°C	0.975 0.925 1.25 1.20	V
I <sub>R</sub>	Maximum DC Reverse Current At Rated DC Blocking Voltage @T <sub>J</sub> =25°C @T <sub>J</sub> =100°C	5 100	uA
C <sub>J</sub>	Typical Junction Capacitance Per Element (Note 1)	80	pF
T <sub>RR</sub>	Maximum Reverse Recovery Time (Note 2)	30	ns
Re <sub>JC</sub>	Typical Thermal Resistance	4.0	°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.

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



# STPR1010CT thru STPR1020CT

## Ultra Fast Recovery Diodes

FIG.1 - FORWARD CURRENT DERATING CURVE

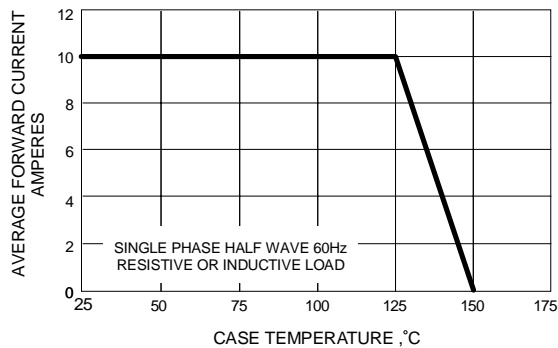


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

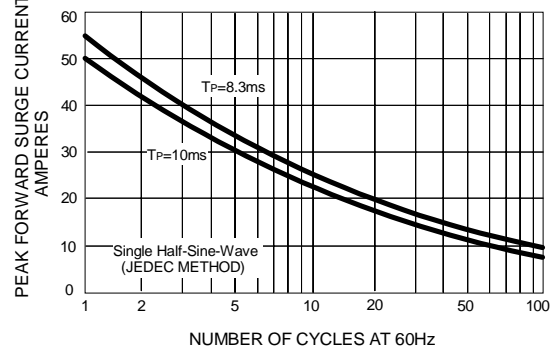


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

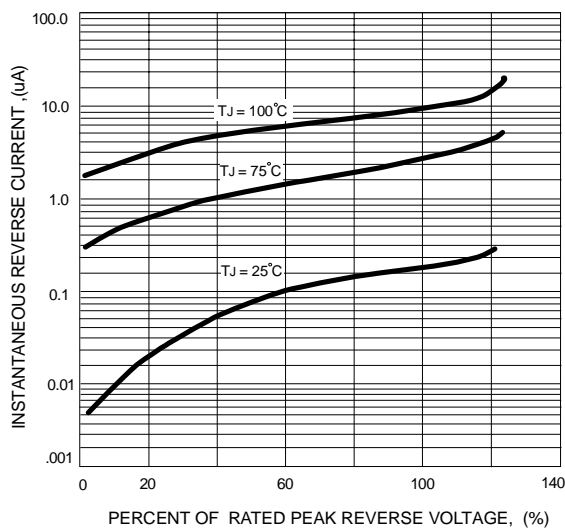


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

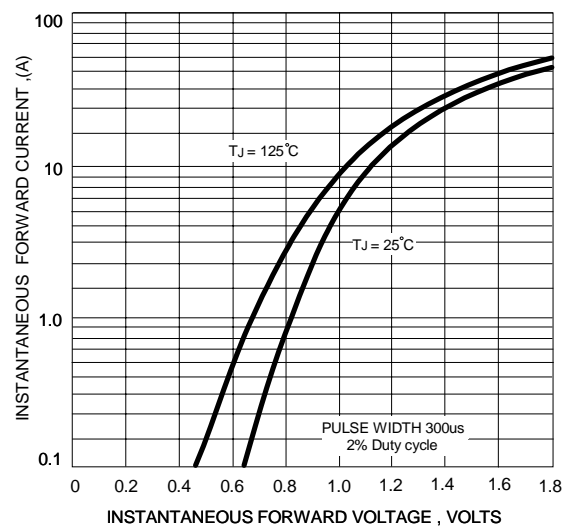


FIG.5 - TYPICAL JUNCTION CAPACITANCE

