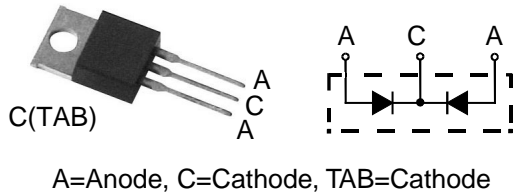
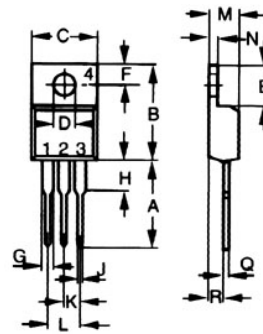


# STPRF1605CT thru STPRF1620CT

## Ultra Fast Recovery Diodes



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	V <sub>RMS</sub> V	V <sub>DC</sub> V
STPRF1605CT	50	35	50
STPRF1610CT	100	70	100
STPRF1615CT	150	105	150
STPRF1620CT	200	140	200

Symbol	Characteristics	Maximum Ratings	Unit
I <sub>AV</sub>	Maximum Average Forward Rectified Current @T <sub>c</sub> =100°C	16	A
I <sub>FSM</sub>	Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)	125	A
V <sub>F</sub>	Maximum Forward Voltage At 8.0A DC	0.95	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	5 500	uA
C <sub>J</sub>	Typical Junction Capacitance Per Element (Note 1)	110	pF
T <sub>RR</sub>	Maximum Reverse Recovery Time (Note 2)	35	ns
R <sub>θJC</sub>	Typical Thermal Resistance (Note 3)	1.5	°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-220AB molded plastic
- \* Polarity: As marked on the body
- \* Weight: 0.08 ounces, 2.24 grams
- \* Mounting position: Any

# STPRF1605CT thru STPRF1620CT

## Ultra Fast Recovery Diodes

FIG.1 - FORWARD CURRENT DERATING CURVE

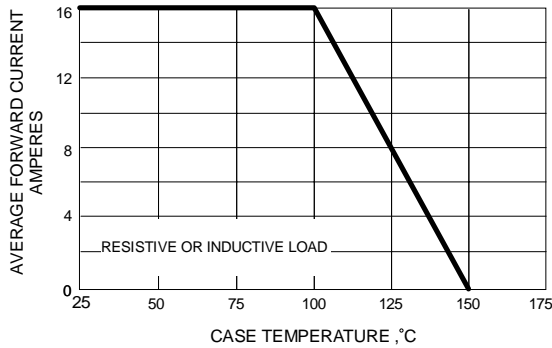


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

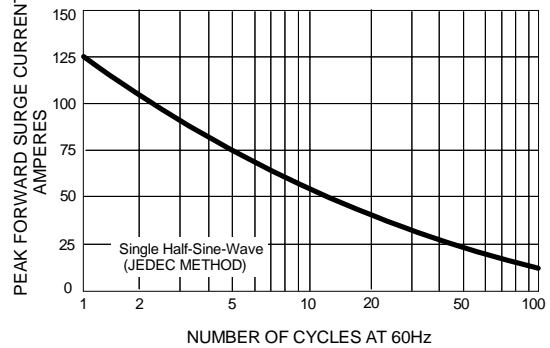


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

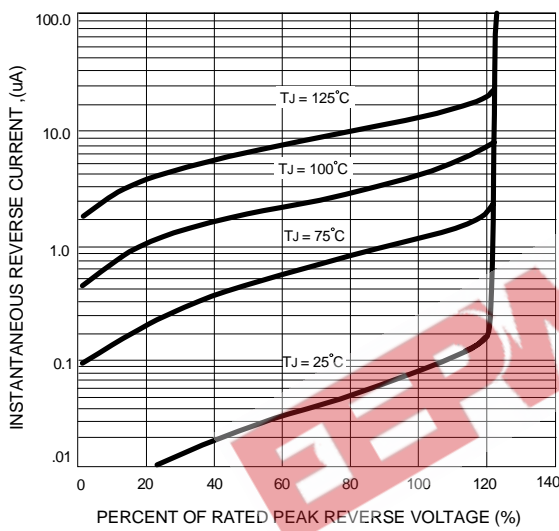


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

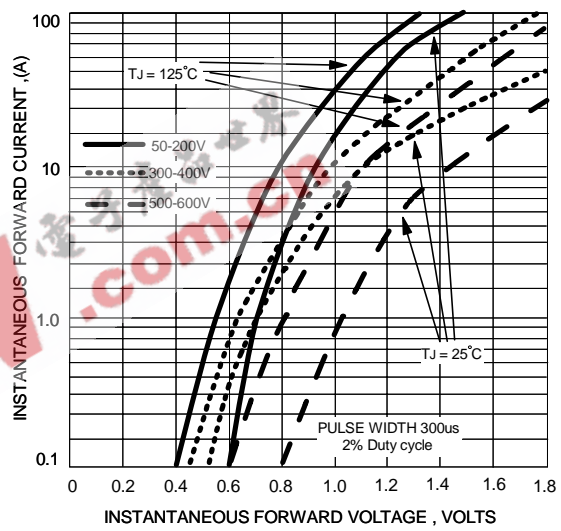


FIG.5 - TYPICAL JUNCTION CAPACITANCE

