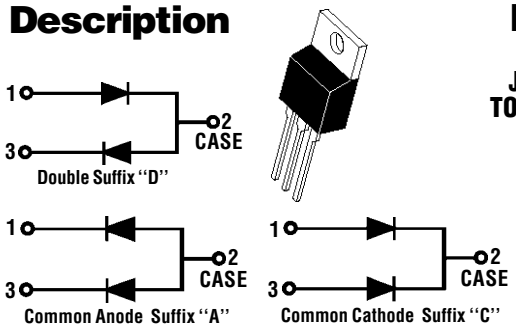
Semiconductor

Data Sheet

10 Amp ULTRAFAST RECOVERY POWER RECTIFIERS

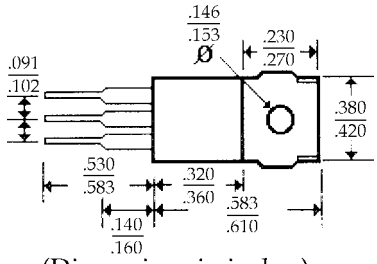
VF10C05...10C80

Description



Mechanical Dimensions

JEDEC TO-220AB



(Dimensions in inches)

Features

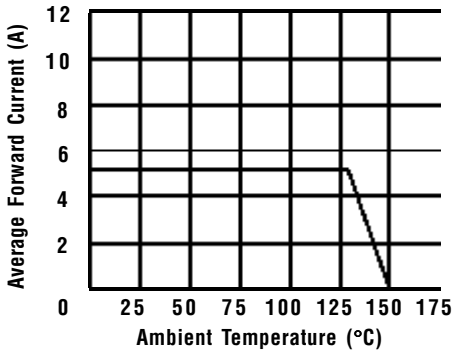
- **LOW FORWARD VOLTAGE**
- ***ULTRAFAST RECOVERY***
- **HIGH SURGE CAPABILITY**
- **MEETS UL SPECIFICATION 94V-0**

	VF10C05.....VF10C80 SERIES	**Units**
Maximum Ratings		
Peak Repetitive Reverse Voltage...V_{RRM}	*50 100 200 300 400 500 600 800*	Volts
Working Peak Reverse Voltage...V_{RWM}	*50 100 200 300 400 500 600 800*	Volts
DC Blocking Voltage...V_{DC}	*50 100 200 300 400 500 600 800*	Volts
RMS Reverse Voltage...$V_{R(rms)}$	*35 70 140 210 280 350 420 560*	Volts
Average Forward Rectified Current...$I_{F(av)}$ (Per Leg) T_C = 100°C @ Rated V_{DC} (Total)	5 10	Amps Amps
Repetitive Peak Forward Surge Current...I_{FM} @ Rated V_{DC}, Square Wave, 20 kHz, T_C = 100°C	10	Amps
Non-Repetitive Peak Forward Surge Current...I_{FSM} @ Rated Load Cond., ½ Wave, Single Phase, 60Hz	*100*	Amps
Operating & Storage Temperature Range...T_J, T_{STRG}	-65 to 150	°C
Electrical Characteristics, Per Diode Leg		
Maximum Forward Voltage...V_F @ I_F = 5 Amps, PW = 300µs T_C = 25°C	*1.0 1.0 1.0 1.3 1.3 1.7 1.7 1.7*	Volts
Maximum DC Reverse Current...I_R @ Rated DC Blocking Voltage T_C =125°C T_C = 25°C	500 10	µAmps µAmps
Maximum Reverse Recovery Time...t_{RR} I_F = 0.5 Amp, I_R= 1A, I_{rr} = 0.25A	*50 50 50 50 50 75 75 75*	ns

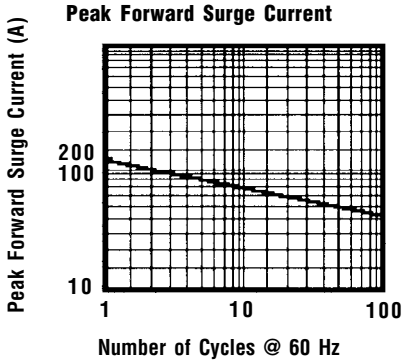
Data Sheet

10 Amp ULTRAFAST RECOVERY POWER RECTIFIERS

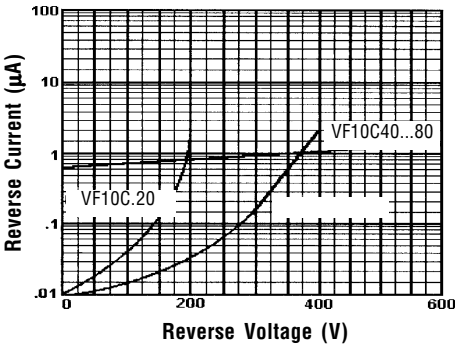
Forward Current Derating Curve



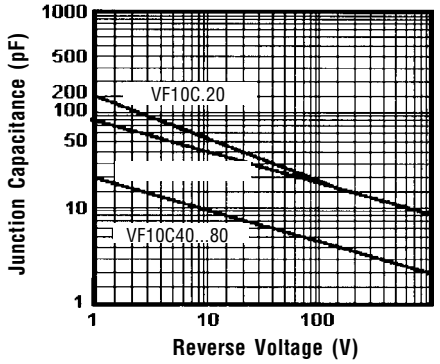
Non-Repetitive Peak Forward Surge Current



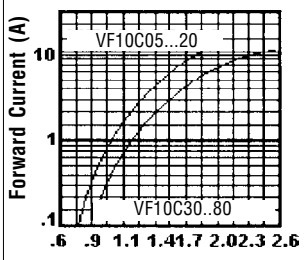
Typical Reverse Characteristics

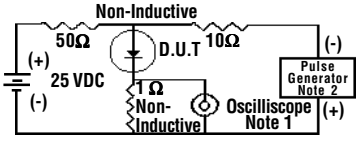


Typical Junction Capacitance



Typical Instantaneous Forward Characteristics

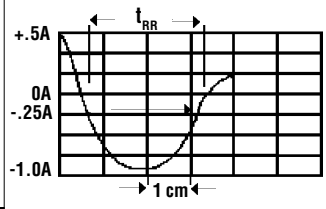




Notes:

1. Rise Time = 7 ns Max. Impedance = 1 megohm, 22 pF
2. Rise Time = 10 ns Max. Source Impedance = 50 Ohms

Reverse Recovery Characteristics



Time Base Set @ 50/100ns/cm

Ratings at 25 Deg. C ambient temperature unless otherwise specified.

Single Phase Half Wave, 60 Hz Resistive or Inductive Load.

For Capacitive Load, Derate Current by 20%.