Ultra Fast Rectifier

multicomp PRO

RoHS Compliant

Features

- High surge capacity
- Low power loss high efficiency
- Glass passivated chip junctions
- 150°C operating junction temperature
- Low stored charge majority carrier conduction
- Low forward voltage, high current capability
- High-switching speed 50 nanosecond recovery time
- Plastic material used carries Underwriters Laboratory
- Flammability classification 94V-0

Specifications

Reverse Voltage : 20 Volts
Forward Current : 8 Amperes

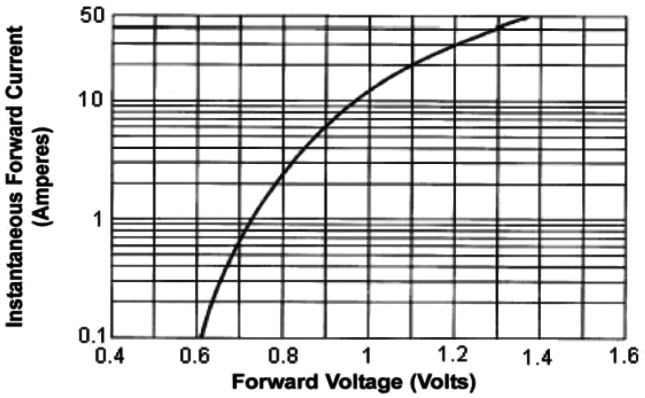
Maximum Ratings

Characteristic	Symbol	Values	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	140	
Average Rectifier Forward Current	$I_{F(AV)}$	8	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-ware, single phase, 60Hz)	I_{FSM}	150	
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +150	°C

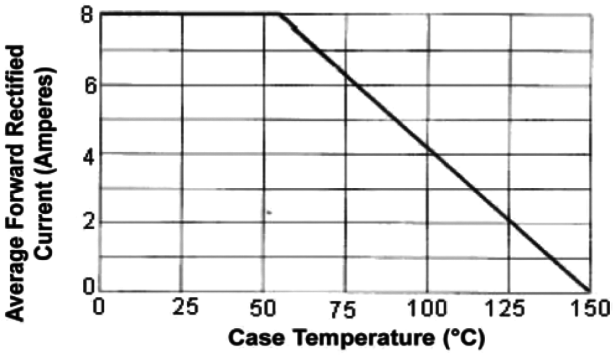
Electrical Characteristics

Characteristic	Symbol	Values	Units
Maximum Instantaneous Forward Voltage (I_F = 15 Amperes T_C = 25°C) (I_F = 15 Amperes T_C = 125°C)	V_F	0.975 0.88	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25°C) (Rated DC Voltage, T_C = 125°C)	I_R	10 500	mA
Reverse Recovery Time (I_F = 0.5A, I_R = 1A, I_{RR} = 0.25A)	T_{RR}	35	ns
Typical Junction Capacitance (Reverse Voltage of 4 Volts and f = 1MHz)	C_P	120	pF

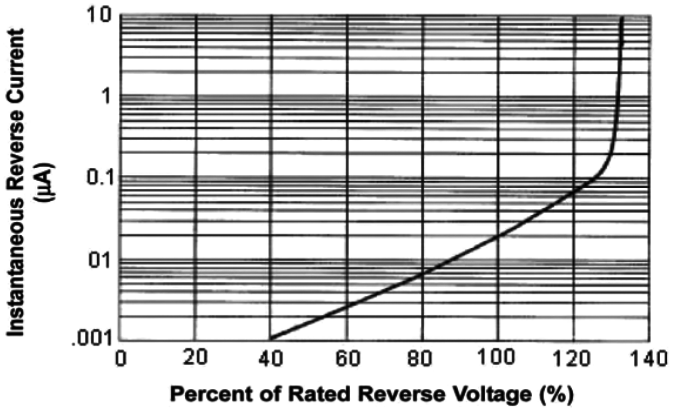
Typical Forward Characteristics



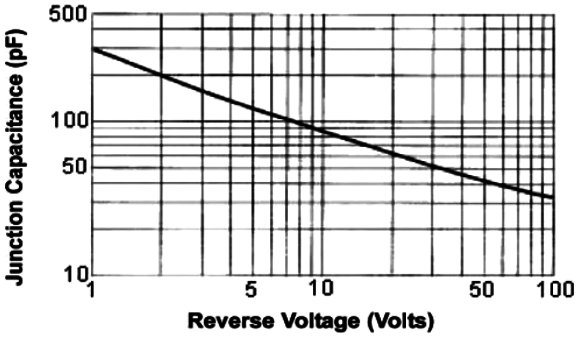
Forward Current Derating Curve



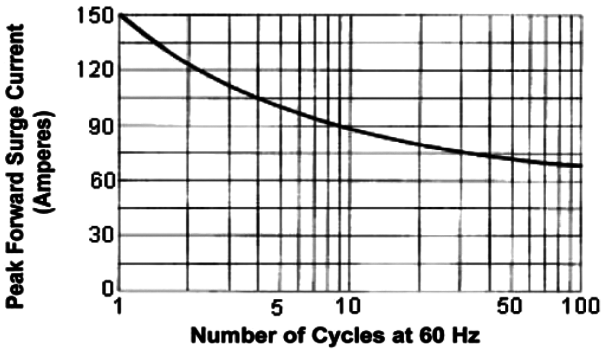
Typical Reverse Characteristics

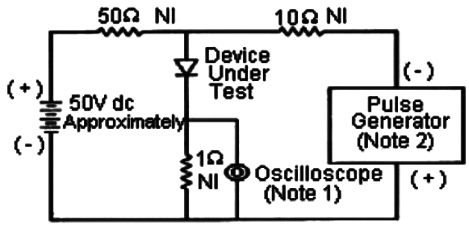


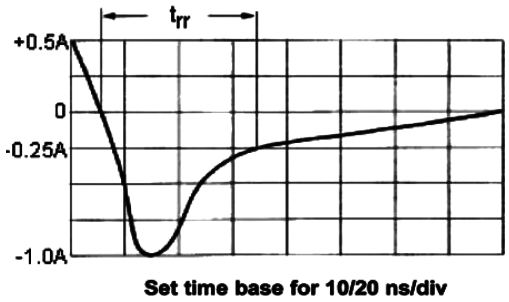
Typical Junction Capacitance



Peak Forward Surge Current







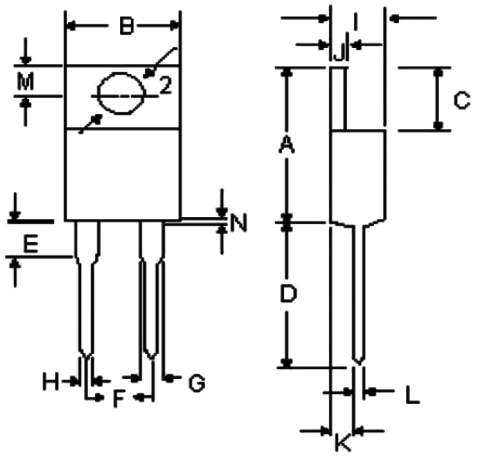
Reverse Recovery Time Characteristic and Test Circuit Diagram

Notes:

1. Rise Time = 7ns maximum input impedance = 1MΩ, 22pF.
2. Rise Time = 10ns maximum input impedance = 50Ω

Diagram

TO-220A

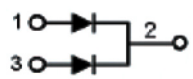


Dim.	Min.	Max.
A	14.68	15.32
B	9.78	10.42
C	6.01	6.52
D	13.06	14.62
E	3.57	4.07
F	4.83	5.33
G	1.12	1.36
H	0.72	0.96

Dim.	Min.	Max.
I	4.22	4.98
J	1.14	1.36
K	2.20	2.97
L	0.33	0.55
M	2.48	2.98
N	-	1
O	3.7	3.9

Dimensions : Millimetres

Common Cathode



Part Number Table

Description	Part Number
Ultra Fast Rectifier, 200V	MUR820