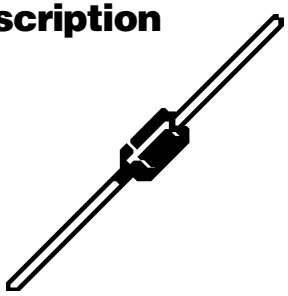
Data Sheet

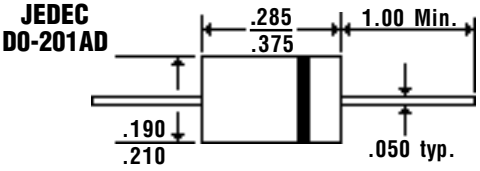
3.0 Amp ULTRA-FAST SWITCHING MEGARECTIFIERS

GUF30A . . . 30M Series

Description



Mechanical Dimensions

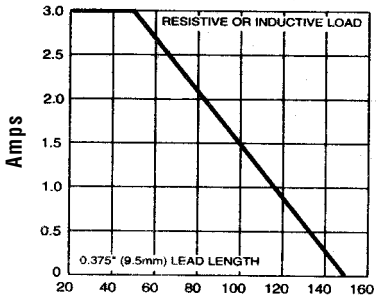


Features

- **HIGH TEMPERATURE METALLURGICALLY BONDED CONSTRUCTION**
- **SINTERED GLASS CAVITY-FREE JUNCTION**
- **3.0 AMP OPERATION @ T_A = 55°C, WITH NO THERMAL RUNAWAY**
- **TYPICAL I_R < 0.2 μAmp**

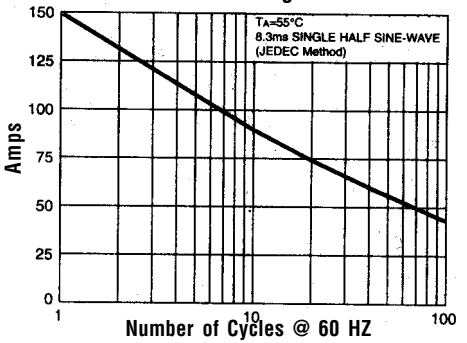
Electrical Characteristics @ 25°C.	GUF30A . . . 30M Series								Units
Maximum Ratings	GUF 30A	GUF 30B	GUF 30D	GUF 30F	GUF 30G	GUF 30J	GUF 30K	GUF 30M	
Peak Repetitive Reverse Voltage...V_{RRM}	50	100	200	300	400	600	800	1000	Volts
RMS Reverse Voltage...$V_{R(rms)}$	35	70	140	210	280	420	560	700	Volts
DC Blocking Voltage...V_{DC}	50	100	200	300	400	600	800	1000	Volts
Average Forward Rectified Current...$I_{F(av)}$ Current 3/8" Lead Length @ T_A = 55°C	3.0								Amps
Non-Repetitive Peak Forward Surge Current...I_{FSM} 8.3mS, ½ Sine Wave Superimposed on Rated Load	150				125				Amps
Forward Voltage @ Rated Forward Current and 25°C...V_F	1.1			1.4		1.7			Volts
Full Load Reverse Current...I_R(av) Full Cycle Average @ T_A = 55°C	100								μAmps
DC Reverse Current...I_R @ Rated DC Blocking Voltage T_A = 25°C	10								μAmps
T_A = 125°C	100								μAmps
Typical Junction Capacitance...C_J *(Note 1)*	17				15				pF
Typical Thermal Resistance...$R_{\theta JA}$ *(Note 2)*	40				50				°C/W
Typical Reverse Recovery Time...t_{RR} *(Note 3)*	50				75				nS
Operating & Storage Temperature Range...T_J, T_{STRG}	-65 to 175								°C

Forward Current Derating Curve



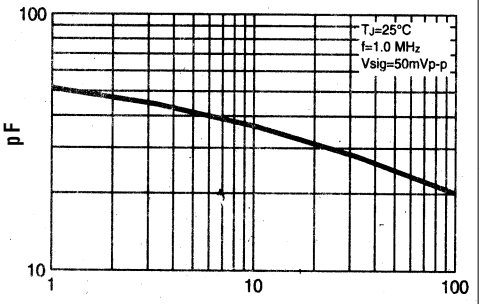
T_A = Ambient Temperature (°C)

Non-Repetitive Peak Forward Surge Current



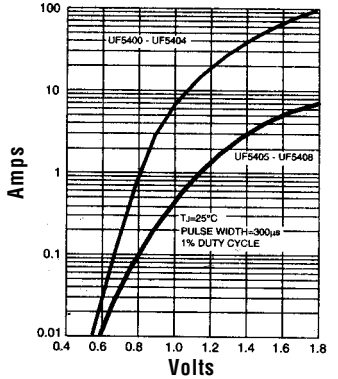
Number of Cycles @ 60 HZ

Typical Junction Capacitance



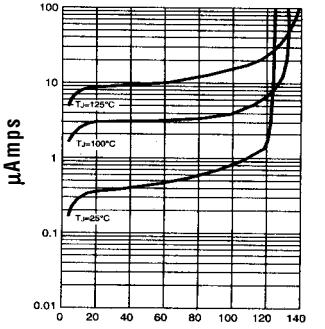
Reverse Voltage (Volts)

Typical Instantaneous Forward Characteristics



Volts

Typical Reverse Characteristics



Percent of Rated Peak Voltage

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%.

NOTES: 1. Measured @ 1 MHZ and applied reverse voltage of 4.0V.
2. Thermal Resistance from Junction to Ambient at 3/8" Lead Length, P.C. Board Mounted.
3. Reverse Recovery Condition I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A.