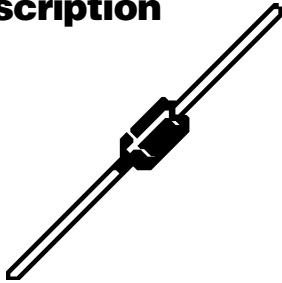


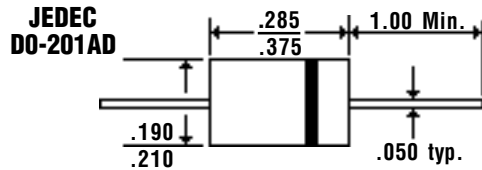
3.0 Amp ULTRA-FAST SWITCHING MEGARECTIFIERS

GUF30A...30M Series

Description



Mechanical Dimensions

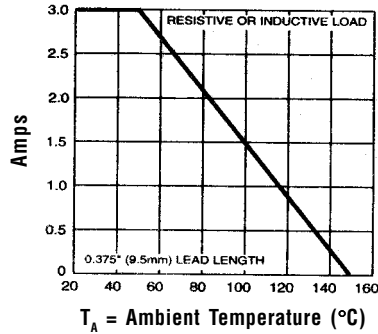


Features

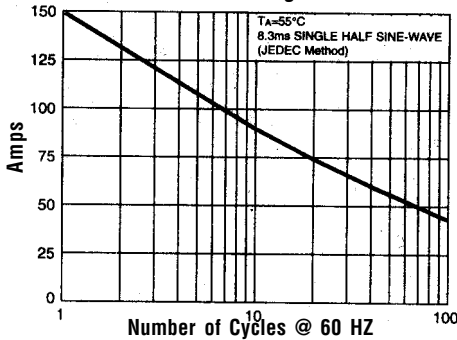
- HIGH TEMPERATURE METALLURGICALLY BONDED CONSTRUCTION
- 3.0 AMP OPERATION @ $T_A = 55^\circ\text{C}$, WITH NO THERMAL RUNAWAY
- SINTERED GLASS CAVITY-FREE JUNCTION
- TYPICAL $I_R < 0.2 \mu\text{Amp}$

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 @ $T_A = 55^\circ\text{C}$	3.0								Amps
Non-Repetitive Peak Forward Surge Current... I_{FSM} 8.3mS, 1/2 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 @ $T_A = 55^\circ\text{C}$	100								μAmps
DC Reverse Current... I_R @ Rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$		10					μAmps	
	$T_A = 125^\circ\text{C}$		100					μAmps	
Typical Junction Capacitance... C_j (Note 1)	< 17 >		< 15 >						pF
Typical Thermal Resistance... $R_{\theta JA}$ (Note 2)	< 40 >		< 50 >						$^\circ\text{C/W}$
Typical Reverse Recovery Time... t_{RR} (Note 3)	< 50 >		< 75 >						nS
Operating & Storage Temperature Range... T_J, T_{STRG}	-65 to 175								$^\circ\text{C}$

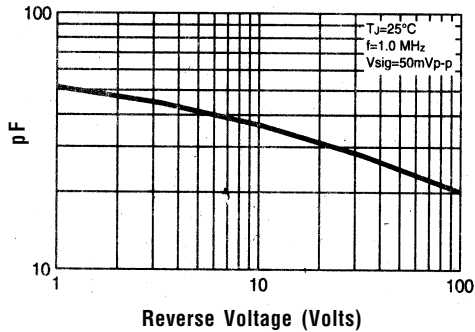
Forward Current Derating Curve



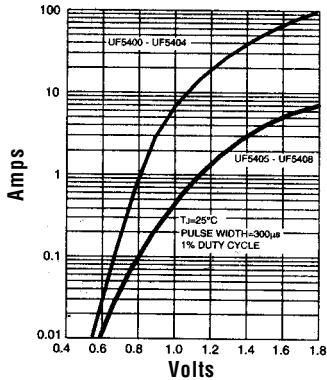
Non-Repetitive Peak Forward Surge Current



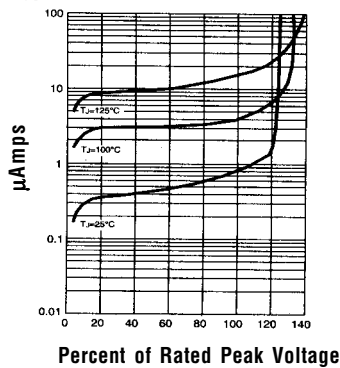
Typical Junction Capacitance



Typical Instantaneous Forward Characteristics



Typical Reverse Characteristics



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 $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.