

Pb Free Plating Product

GB488U/GB489UR

300A Stud Type Device Series-Standard Rectifier Diodes

Feature

- Hermetic ceramics-metal stud structure
- Conform to national standard JB/T8949.2-1998
- Capacity of supporting high surge current
- Stud cathode and stud anode version

Typical Application

- DC motor controls Controls DC power supply Turbo generator exciter
- AC switch and thermal control Synchronous motor excitation

$I_{F(AV)}$	300A
V_{RRM}	100-5000V
I_{FSM}	8.25 KA
I^2t	64 KA ² S

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_J (°C)	VALUE		UNIT
				Min	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave, 50HZ Single heat sink, $T_C=98^\circ\text{C}$	150		300	A
$I_{F(RMS)}$	RMS current		150		3700	A
V_{RRM}	Repetitive peak reverse voltage	$V_{DRM}\&V_{RRM}$ tp=10ms $V_{DSM}\&V_{RSM}=V_{DRM}\&V_{RRM}+200V$	150	100	5000	V
I_{RRM}	Repetitive peak current	$V_{RM}=V_{RRM}$	150		15	mA
I_{FSM}	Surge on-state current	10ms half sine wave	150		8.25	KA
I^2t	I^2t for fusing	$V_R=0.6V_{RRM}$			68	KA ² S
V_{TO}	Threshold voltage		150		0.83	V
r_T	On-state slop resistance				0.91	mΩ
V_{FM}	Peak on-state voltage	$I_{TM}=30A, F=9.0KN$	150		1.33	V
I_{rm}	Reverse recovery	$I_{TM}=30A, t_q=1000us$ $Di/dt=-20A/us.$ $V_r=50V$	150		70	A
t_{rr}	Reverse recovery time				4.0	us
Q_{rr}	Recovered charge				140	uC
$R_{th(j-h)}$	Thermal impedance node to the shell	180 ° sine wave, single heat sink			0.090	°C/W
F_M	Mounting force			85	120	N
T_{stq}	Stored temperature			-40	200	°C
W_t	Weight			470		g

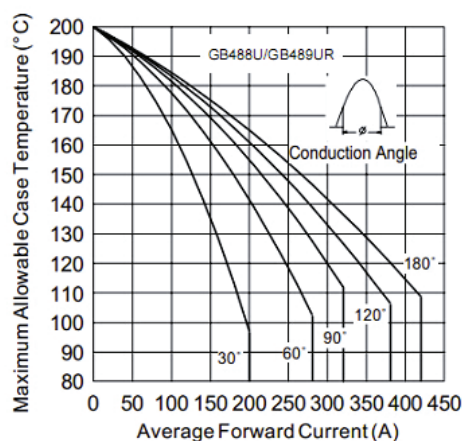


Fig. 1 - Current Ratings Characteristics

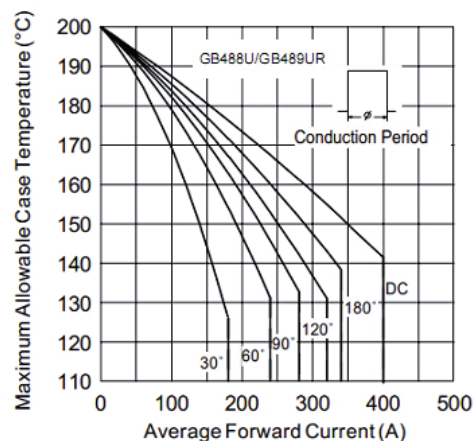


Fig. 2 - Current Ratings Characteristics

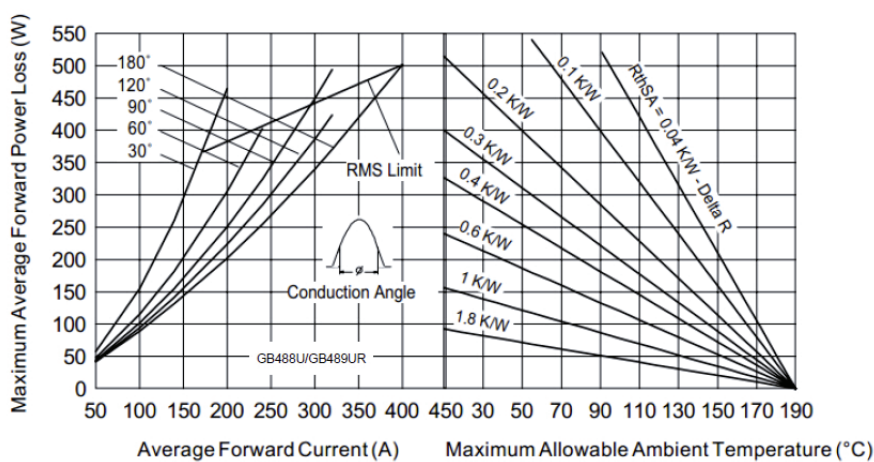


Fig. 3 - Forward Power Loss Characteristics

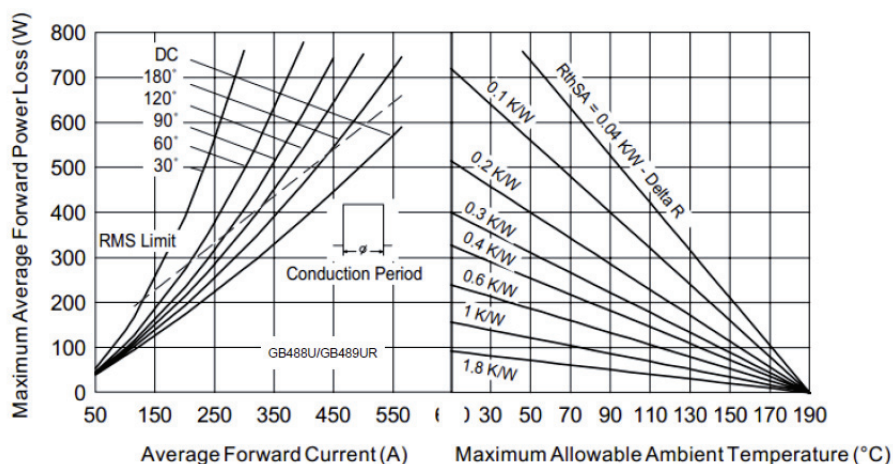


Fig. 4 - Forward Power Loss Characteristics

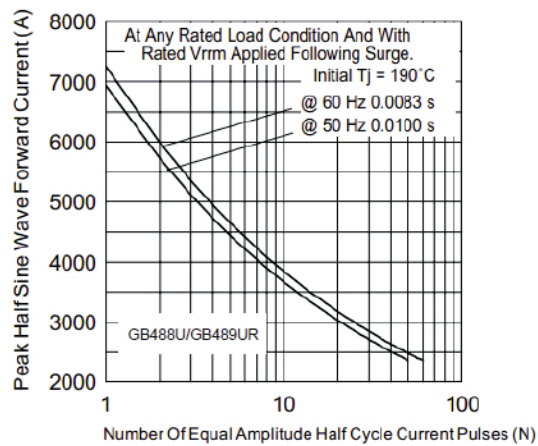


Fig. 5 - Maximum Non-Repetitive Surge Current

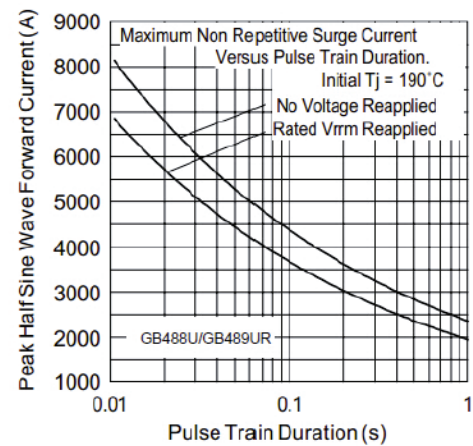


Fig. 6 - Maximum Non-Repetitive Surge Current

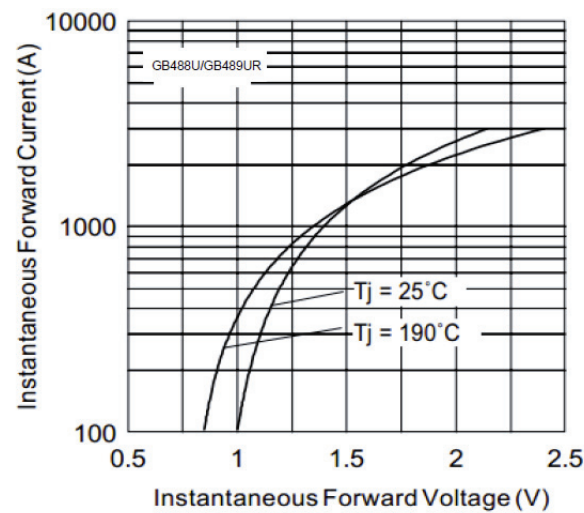
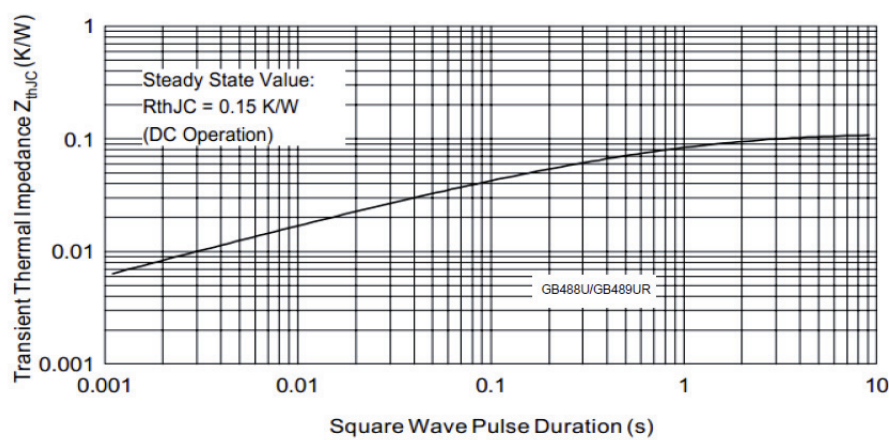


Fig. 7 - Forward Voltage Drop Characteristics

Fig. 8 - Thermal Impedance Z_{thJC} Characteristic

Outline:

