

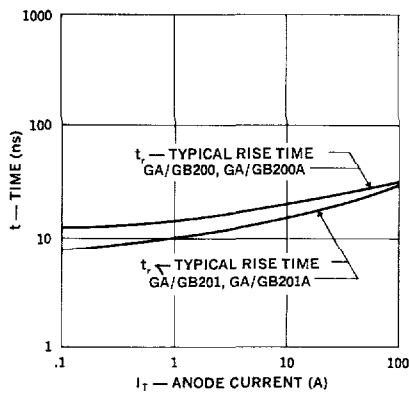
ELECTRICAL SPECIFICATIONS (at 25°C unless noted)

Test	Symbol	Min.	Typ.	Max.	Units	Test Conditions
Delay Time	t_d	—	20 10	30 —	ns ns	$I_G = 20\text{mA}, I_T = 1\text{A}$ $I_G = 30\text{mA}, I_T = 1\text{A}$
Rise Time GA200, 200A, GB200, 200A	t_r	—	15 25	25 —	ns ns	$V_D = 60\text{V}, I_T = 1\text{A}$ (1) $V_D = 60\text{V}, I_T = 30\text{A}$ (1)
Rise Time GA201, 201A, GB201, 201A	t_r	—	10 20	20 —	ns ns	$V_D = 100\text{V}, I_T = 1\text{A}$ (1) $V_D = 100\text{V}, I_T = 30\text{A}$ (1)
Gate Trigger on Pulse Width	$t_{pg(on)}$	—	.02	.05	μs	$I_G = 10\text{mA}, I_T = 1\text{A}$
Circuit Commutated Turn-off Time GA200, 201, GB200, 201	t_q	—	0.8	2.0	μs	$I_T = 1\text{A}, I_R = 1\text{A}, R_{GK} = 1\text{K}$
GA200A, 201A, GB200A, 201A	t_q	—	0.3	0.5	μs	
Off-State Current	I_{DRM}	—	.01	0.1	μA	$V_{DRM} = \text{Rating}, R_{GK} = 1\text{K}$
		—	20	100	μA	$V_{DRM} = \text{Rating}, R_{GK} = 1\text{K}, 150^\circ\text{C}$
Reverse Current	I_{RRM}	—	1.0	10	mA	$V_{RRM} = 30\text{V}, R_{GK} = 1\text{K}$ (2)
Reverse Gate Current	I_{GR}	—	.01	0.1	mA	$V_{GRM} = 5\text{V}$
Gate Trigger Current	I_{GT}	—	10	200	μA	$V_D = 5\text{V}, R_{GS} = 10\text{K}$
Gate Trigger Voltage	V_{GT}	0.4	.6	0.75	V	$V_D = 5\text{V}, R_{GS} = 100\Omega, T = 25^\circ\text{C}$
		0.10	0.2	—	V	$T = +150^\circ\text{C}$
On-State Voltage	V_T	—	1.1	1.5	V	$I_T = 2\text{A}$
Holding Current	I_H	0.3	2.0	5.0	mA	$V_D = 5\text{V}, R_{GK} = 1\text{K}, T = 25^\circ\text{C}$
		0.05	0.2	—	mA	$T = +150^\circ\text{C}$
Off-State Voltage-Critical Rate of Rise	dv/dt	20	40	—	$\text{V}/\mu\text{s}$	$V_D = 30\text{V}, R_{GK} = 1\text{K}$

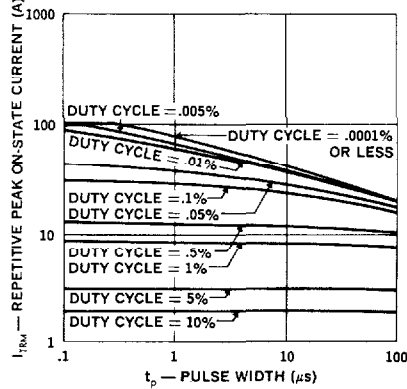
Notes: 1. $I_G = 10\text{mA}$; Pulse Test, Duty Cycle $<1\%$.

2. Pulse test intended to guarantee reverse anode voltage capability for pulse commutation. Device should not be operated in the Reverse blocking mode on a continuous basis.

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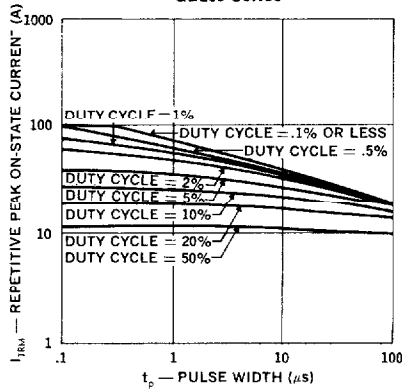
Switching Speed (Typical)
GA/GB200 Series

NOTES: 1. $V_D = \text{Rated } V_{DRM}$
 2. $T_A = 25^\circ\text{C}$
 3. $I_G = 20\text{mA}$
 4. $t_d = 20\text{ns}$ TYPICALLY FOR ALL TYPES INDEPENDENT OF ANODE CURRENT

Peak Current vs. Pulse Width
GA200 Series

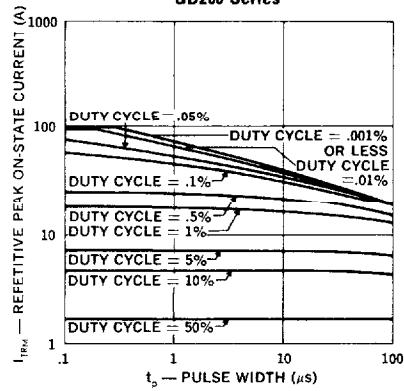
NOTES: 1. DATA BASED ON ON-STATE VOLTAGE GRAPH AT $T_J = 150^\circ\text{C}$. BLOCKING VOLTAGE MAY BE APPLIED IMMEDIATELY AFTER TERMINATION OF CURRENT PULSE.
 2. $T_A = 75^\circ\text{C}$

Peak Current vs. Pulse Width
GB200 Series



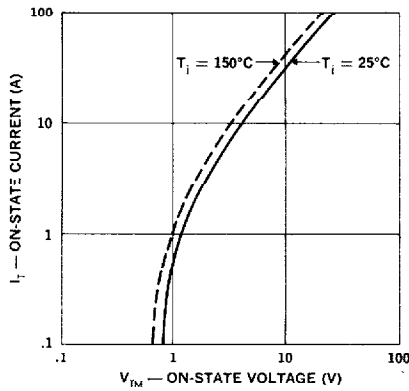
- NOTES: 1. DATA BASED ON ON-STATE VOLTAGE GRAPH AT $T_J = 150^\circ\text{C}$. BLOCKING VOLTAGE MAY BE APPLIED IMMEDIATELY AFTER TERMINATION OF CURRENT PULSE.
2. $T_C = 75^\circ\text{C}$

Peak Current vs. Pulse Width
GB200 Series

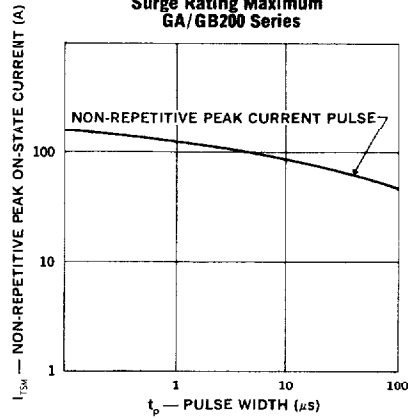


- NOTES: 1. DATA BASED ON ON-STATE VOLTAGE GRAPH AT $T_J = 150^\circ\text{C}$. BLOCKING VOLTAGE MAY BE APPLIED IMMEDIATELY AFTER TERMINATION OF CURRENT PULSE.
2. $T_A = 75^\circ\text{C}$

On-State Current vs. Voltage
GA/GB200 Series



Surge Rating Maximum
GA/GB200 Series



- NOTES: 1. BLOCKING VOLTAGE MAY NOT BE APPLIED FOR .001 SEC. AFTER TERMINATION OF SURGE PULSE AS JUNCTION TEMPERATURE WILL EXCEED 150°C .
2. $T_C = 75^\circ\text{C}$

