

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS

Ratings	Symbol	GA200 GA200A	GA201 GA201A	GB200 GB200A	GB201 GB201A
Repetitive peak off state voltage	V_{DRM}	60V	100V	60V	100V
Repetitive peak on state current	I_{TRM}	Up to 100A			
DC on state current 70°C ambient 70°C case	I_T	200mA 400mA			- 6A
Peak gate current	I_{GM}	250mA			250mA
Average gate current	$I_{G(AV)}$	25mA			50mA
Reverse gate current	I_{GR}	3mA			3mA
Reverse gate voltage	V_{GR}	5V			5V
Thermal resistance	R_{GCA}	300°C/W			
Storage temperature range	T_{stg}	-65° to 200°C			
Operating temperature range	T_J	-65° to 150°C			

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Test	Symbol	Min.	Typ.	Max.	Units	Test Conditions
Delay time	t_d	-	20	30	ns	$I_G = 20\text{mA}, I_T = 1\text{A}$
		-	10	-		$I_G = 30\text{mA}, I_T = 1\text{A}$
Rise time (GA200, GA200A, GB200, GB200A)	t_r	-	15	25	ns	$V_D = 60\text{V}, I_T = 1\text{A}(1)$
		-	25	-		$V_D = 60\text{V}, I_T = 30\text{A}(1)$
Rise time (GA201, GA201A, GB201, GB201A)	t_r	-	10	20	ns	$V_D = 100\text{V}, I_T = 1\text{A}(1)$
		-	20	-		$V_D = 100\text{V}, I_T = 30\text{A}(1)$
Gate trigger on pulse width	$t_{pg(on)}$	-	0.02	0.05	μs	$I_G = 10\text{mA}, I_T = 1\text{A}$
Circuit commutated turn-off time (GA200, GA201, GB200, GB201) (GA200A, GA201A, GB200A, GB201A)	t_q	-	0.8	2.0	μs	$I_T = 1\text{A}, I_R = 1\text{A}, R_{GK} = 1\text{K}$
		-	0.3	0.5		
Off-state current	I_{DRM}	-	0.01	0.1	μA	$V_{DRM} = \text{Rating}, R_{GK} = 1\text{K}$
		-	20	100		$V_{DRM} = \text{rating}, R_{GK} = 1\text{K}, 150^\circ\text{C}$
Reverse current	I_{RRM}	-	1.0	10	mA	$V_{RRM} = 30\text{V}, R_{GK} = 1\text{K}(2)$
Reverse gate current	I_{GR}	-	0.01	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	0.6	0.75	V	$V_D = 5\text{V}, R_{GS} = 100\Omega, T = 25^\circ\text{C}$
		0.10	0.20	-	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	-	$\text{V}/\mu\text{s}$	$V_D = 30\text{V}, R_{GK} = 1\text{K}$

Note 1: $I_G = 10\text{mA}$, Pulse test: Duty cycle < 1%.

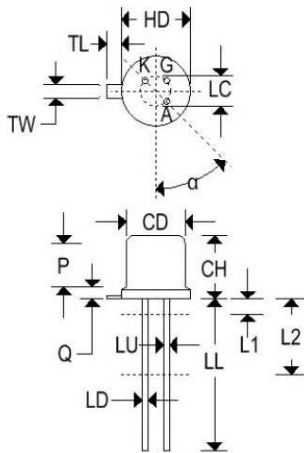
Note 2: Pulse test intended to guarantee reverse anode voltage capability for pulse commutation. Device should not be operated in the reverse blocking mode on a continuous basis.

GA200-GA201A

SILICON CONTROLLED RECTIFIERS

MECHANICAL CHARACTERISTICS

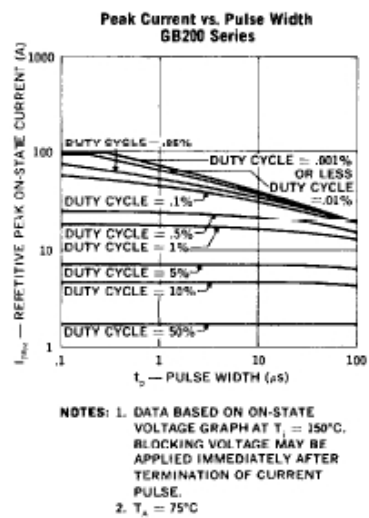
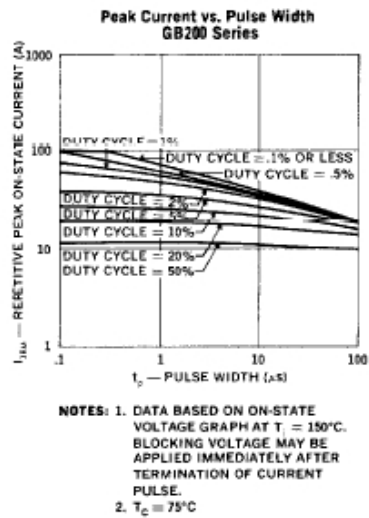
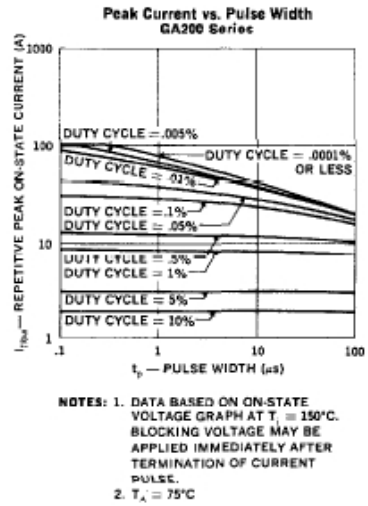
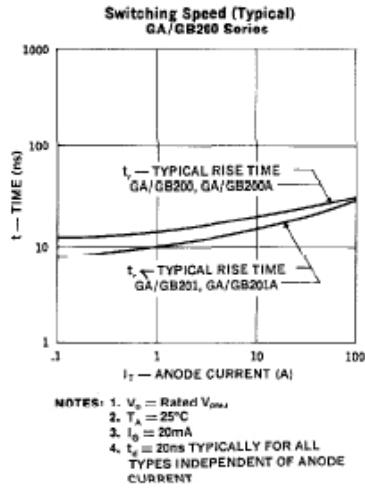
Case	TO-18
Marking	Alpha-numeric
Pin out	See below



	TO-18			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.209	0.230	5.310	5.840
B	0.178	0.195	4.520	4.950
C	0.170	0.210	4.320	5.330
D	0.016	0.021	0.406	0.533
E	-	0.030	-	0.762
F	0.016	0.019	0.406	0.483
G	0.100 BSC		2.540 BSC	
H	0.036	0.046	0.914	1.170
J	0.028	0.048	0.711	1.220
K	0.500	-	12.700	-
L	0.250	-	6.350	-
M	45°C BSC		45° BSC	
N	0.050 BSC		1.270 BSC	
P	-	0.050	-	1.270

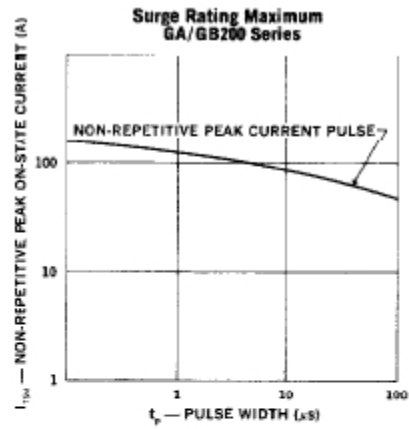
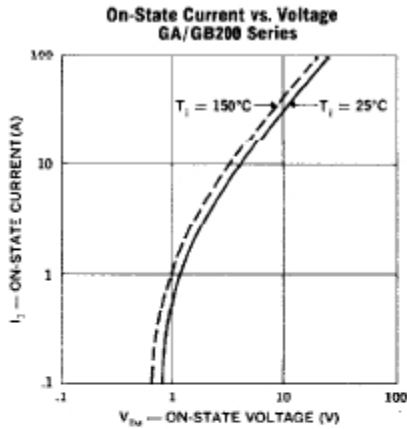
GA200-GA201A

SILICON CONTROLLED RECTIFIERS



GA200-GA201A

SILICON CONTROLLED RECTIFIERS



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

