

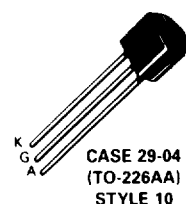
Silicon Controlled Rectifiers

... designed and tested for repetitive peak operation required for CD ignition, fuel ignitors, flash circuits, motor controls and low-power switching applications.

- 150 Amperes for 2 μ s Safe Area
- High dv/dt
- Very Low V_F at High Current
- Low-Cost TO-226AA (TO-92)

C205 Series

SCRs
1.2 AMPERES RMS
30 thru 400 VOLTS



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MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Repetitive Peak Off-State Voltage, Note 1	V_{RRM}		Volts
Repetitive Peak Reverse Voltage	V_{DRM}		
C205Y		30	
C205YY		60	
C205A		100	
C205B		200	
C205D		400	
Forward Current RMS (All Conduction Angles)	$I_T(RMS)$	1.2	Amps
Peak Forward Surge Current (1/2 Cycle, Sine Wave, 60 Hz)	I_{TSM}	10	Amps
Forward Peak Gate Power T_A 25°C	P_{GM}	0.5	Watts
Forward Average Gate Power T_A 25°C	$P_{G(AV)}$	0.1	Watt
Forward Peak Gate Current T_A 25°C	I_{GM}	0.2	Amps
Operating Junction Temperature Range	T_J	40 to +125	°C
Storage Temperature Range	T_{stg}	40 to -150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	R_{θ}	75	°C/W

Note 1. V_{RRM} for all types can be applied on a continuous dc basis without incurring damage. Ratings apply for zero or negative gate voltage. Devices should not be tested for blocking capability in a manner such that the voltage supplied exceeds the rated blocking voltage.

C205 Series

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted. $R_{GK} = 1000$ Ohms)

Characteristic	Symbol	Min	Typ	Max	Unit
Peak Forward Blocking Current (Rated V_{DRM})	I_{DRM}	—	—	10 200	μA
Peak Reverse Blocking Current (Rated V_{RRM})	I_{RRM}	—	—	10 200	μA
Peak On-State Voltage, Note 1 ($I_{TM} = 1$ A Peak, $T_C = 25^\circ\text{C}$)	V_{TM}	—	—	1.6	Volts
Gate Trigger Current (Continuous dc) ($V_D = 6$ V, $R_L = 100$ Ohms, $T_C = 25^\circ\text{C}$ $T_C = -40^\circ\text{C}$)	I_{GT}	—	—	200 500	μA
Gate Trigger Voltage (Continuous dc) ($V_D = 7$ V, $R_L = 100$ Ohms, $T_C = 25^\circ\text{C}$)	V_{GT}	—	—	0.8	Volts
Holding Current Anode Voltage = 12 Vdc	I_H	—	—	5 10	mA
Turn-Off Time ($V_{DRM} =$ Rated Voltage) $T_J = +125^\circ\text{C}$	t_q	—	15	—	μs
Forward Voltage Application Rate ($T_C = 100^\circ\text{C}$)	dv/dt	—	20	—	$\text{V}/\mu\text{s}$

Note 1. Pulse Test: Pulse Width = 1 ms, Duty Cycle = 2%.