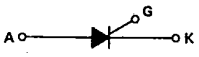
2N4213 thru 2N4219

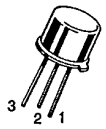
Silicon Controlled Rectifiers
Reverse Blocking Triode Thyristor

SCRs
1.6 AMPERES RMS
50 thru 400 VOLTS

... all diffused PNPN devices designed for operation in mA/μA signal or detection circuits.

- Low-Level Gate Characteristics — I_{GT} = 100 μA Max @ 25°C
- Low Holding Current — I_{HX} = 3 mA Max @ 25°C
- Anode Common To Case
- Glass-to-Metal Bond for Maximum Hermetic Seal





CASE 79-04
(TO-205AD)
STYLE 3

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***MAXIMUM RATINGS** (T_J = 125°C unless otherwise noted.)

Characteristic	Symbol	Rating	Unit
Peak Repetitive Forward and Reverse Blocking Voltage, Note 1 2N4213 2N4214 2N4216 2N4219	V_{DRM} or V_{RRM}	 50 100 200 400	Volts
Forward Current RMS (All Conduction Angles)	$I_{T(RMS)}$	1.6	Amps
Peak Surge Current (One Cycle, 60 Hz) No Repetition until Thermal Equilibrium is Restored	I_{TSM}	15	Amps
Peak Gate Power — Forward	P_{GFM}	0.1	Watt
Average Gate Power — Forward	$P_{GF(AV)}$	0.01	Watt
Peak Gate Current — Forward	I_{GFM}	0.1	Amp
Peak Gate Voltage — Forward Reverse	V_{GFM} V_{GRM}	6 6	Volts
Operating Junction Temperature Range	T_J	−65 to +125	°C
Storage Temperature Range	T_{stg}	−65 to +150	°C
Lead Solder Temperature (>1/16" from case, 10 s max)	—	+230	°C

*Indicates JEDEC Registered Values.

Note 1. V_{DRM} and V_{RRM} can be applied for all types on a continuous dc basis without incurring damage.

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted, R_{GK} = 1000 ohms.), Note 1

Characteristic	Symbol	Min	Max	Unit
*Peak Forward or Reverse Blocking Current (Rated V_{DRM} or V_{RRM}, gate open) T_J = 25°C	I_{DRM}, I_{RRM}	—	10	μA
T_J = 125°C		—	200	μA
*Forward "On" Voltage (I_{TM} = 1 Adc peak)	V_{TM}	—	1.5	Volts
Gate Trigger Current (Continuous dc), Note 2 (V_D = 7 V, R_L = 100 ohms)	I_{GT}			μAdc
(T_C = 25°C)		—	100	
(T_C = −65°C)		—	300	
Gate Trigger Voltage (Continuous dc)	V_{GT}			Volt
(V_D = 7 V, R_L = 100 ohms, T_C = 25°C)		—	0.8	
*(V_D = 7 V, R_L = 100 ohms, T_C = −65°C)		—	1	
*(V_D = Rated V_{DRM}, R_L = 100 ohms, T_J = 125°C)		0.1	—	
Holding Current (V_D = 7 V) T_C = 25°C	I_{HX}		3	mA
*T_C = −65°C			7	
Turn-On Time	t_{on}	Circuit dependent, consult manufacturer		
Turn-Off Time	t_{off}			

*Indicates JEDEC Registered Values.

Notes: 1. Thyristor devices shall not be tested with a constant current source for forward or reverse blocking capability such that the voltage applied exceeds the rated blocking voltage.

Thyristor devices shall not have a positive bias applied to the gate concurrently with a negative potential applied to the anode.

2. R_{GK} current is not included in measurement.

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FIGURE 1 – CASE TEMPERATURE vs CURRENT

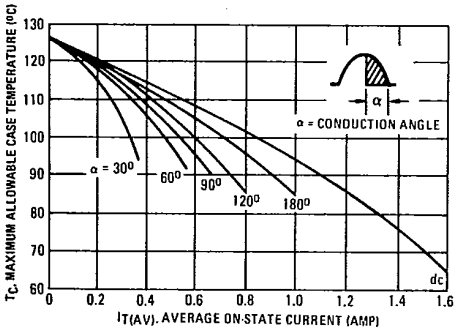

FIGURE 2 – AMBIENT TEMPERATURE vs CURRENT