

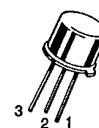
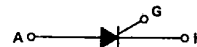
Silicon Controlled Rectifiers Reverse Blocking Triode Thyristor

... all diffused PNP devices designed for operation in mA/ μ A signal or detection circuits.

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

**2N4213
thru
2N4219**

**SCRs
1.6 AMPERES RMS
50 thru 400 VOLTS**



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

***MAXIMUM RATINGS** ($T_J = 125^\circ\text{C}$ 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)	$I_T(\text{RMS})$	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	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 to +150	$^\circ\text{C}$
Lead Solder Temperature ($>1/16"$ from case, 10 s max)	—	+230	$^\circ\text{C}$

*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.

2N4213 thru 2N4219

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted, $R_{GK} = 1000\text{ ohms.}$), Note 1

Characteristic	Symbol	Min	Max	Unit
*Peak Forward or Reverse Blocking Current (Rated V_{DRM} or V_{RRM} , gate open) $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	I_{DRM}, I_{RRM}	— —	10 200	μA μA
*Forward "On" Voltage ($I_{TM} = 1\text{ A dc peak}$)	V_{TM}	—	1.5	Volts
Gate Trigger Current (Continuous dc), Note 2 ($V_D = 7\text{ V}$, $R_L = 100\text{ ohms}$) ($T_C = 25^\circ\text{C}$) ($T_C = -65^\circ\text{C}$)	I_{GT}	— —	100 300	$\mu\text{A dc}$
Gate Trigger Voltage (Continuous dc) ($V_D = 7\text{ V}$, $R_L = 100\text{ ohms}$, $T_C = 25^\circ\text{C}$) *($V_D = 7\text{ V}$, $R_L = 100\text{ ohms}$, $T_C = -65^\circ\text{C}$) *($V_D = \text{Rated } V_{DRM}$, $R_L = 100\text{ ohms}$, $T_J = 125^\circ\text{C}$)	V_{GT}	— — 0.1	0.8 1 —	Volt
Holding Current ($V_D = 7\text{ V}$) $T_C = 25^\circ\text{C}$ * $T_C = -65^\circ\text{C}$	I_{HX}		3 7	mA
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

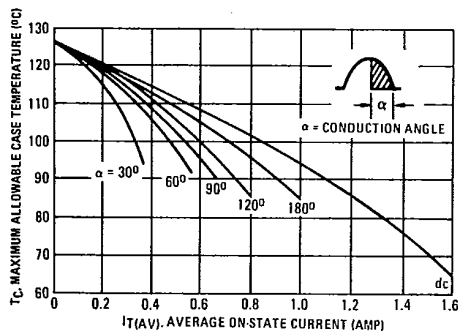


FIGURE 2 — AMBIENT TEMPERATURE vs CURRENT

