

MOTOROLA SC (DIODES/OPTO)

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T-25-15

Silicon Controlled Rectifiers

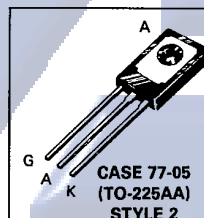
Reverse Blocking Triode Thyristors

... designed for high-volume consumer phase-control applications such as motor speed, temperature, and light controls and for switching applications in ignition and starting systems, voltage regulators, vending machines, and lamp drivers requiring:

- Small, Rugged, Thermopad Construction — for Low Thermal Resistance, High Heat Dissipation, and Durability
- Practical Level Triggering and Holding Characteristics @ 25°C
 $I_{GT} = 7 \text{ mA (Typ)}$
 $I_H = 6 \text{ mA (Typ)}$
- Low "On" Voltage — $V_{TM} = 1 \text{ Volt (Typ)}$ @ 5 Amps @ 25°C
- High Surge Current Rating — $I_{TSM} = 80 \text{ Amps}$

**2N4441
thru
2N4444**

**SCRs
8 AMPERES RMS
50 thru 600 VOLTS**



MAXIMUM RATINGS ($T_J = 100^\circ\text{C}$ unless otherwise noted.)

Rating	Symbol	Value	Unit
Peak Repetitive Forward and Reverse Blocking Voltage, Note 1 2N4441 2N4442 2N4443 2N4444	V_{DRM} or V_{RRM}	50 200 400 600	Volts
*Non-Repetitive Peak Reverse Blocking Voltage ($t = 5 \text{ ms (max)}$ duration) 2N4441 2N4442 2N4443 2N4444	V_{RSM}	75 300 500 700	Volts
*RMS On-State Current (All Conduction Angles)	$I_{T(RMS)}$	8	Amps
Average On-State Current, $T_C = 73^\circ\text{C}$	$I_{T(AV)}$	5.1	Amps
*Peak Non-Repetitive Surge Current (1/2 cycle, 60 Hz preceded and followed by rated current and voltage)	I_{TSM}	80	Amps
Circuit Fusing ($T_J = -40 \text{ to } +100^\circ\text{C}$; $t = 1 \text{ to } 8.3 \text{ ms}$)	I^2t	25	A^2s
*Peak Gate Power	P_{GM}	5	Watts
*Average Gate Power	$P_{G(AV)}$	0.5	Watt
*Peak Forward Gate Current	I_{GM}	2	Amps
*Peak Reverse Gate Voltage	V_{RGM}	10	Volts

*Indicates JEDEC Registered Data.

(cont.)

Note 1. Ratings apply for zero or negative gate voltage but positive gate voltage shall not be applied concurrently with a negative potential on the anode. When checking forward or reverse blocking capability, thyristor devices should not be tested with a constant current source in a manner that the voltage applied exceeds the rated blocking voltage.

MOTOROLA THYRISTOR DEVICE DATA

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