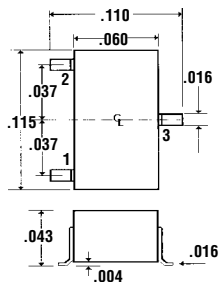
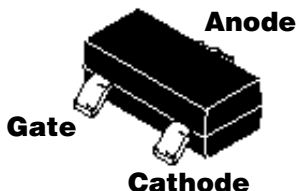




0.3 Amp Silicon Controlled Rectifiers

Mechanical Dimensions

FCR03S Series



Features

- DIRECTLY DRIVEN WITH IC AND MOS DEVICE
- AVAILABLE IN VOLTAGE RATINGS FROM 200 TO 600 VOLTS
- VOID-FREE GLASS PASSIVATED CHIPS
- SENSITIVE GATE TRIGGER CURRENT

Maximum Ratings and Electrical Characteristics

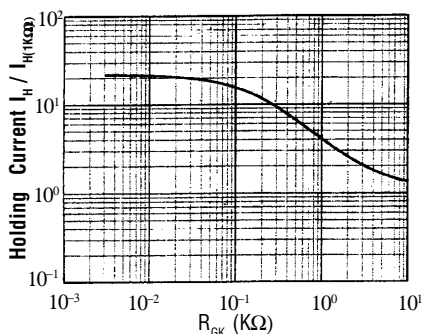
	Symbol	Value	Units
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage @ $T_c = 125^\circ\text{C}$	V_{DRM} V_{RRM}	200 400 600	Volts
RMS On-State Current @ $T_c = 50^\circ\text{C}$ and Conduction Angle of 180°	$I_{\text{T(AV)}}$	0.3	Amps
Peak-Surge On-State Current One cycle @ 50Hz or 60Hz	V_{TSM}	6	Amps
Peak Gate-Trigger Current for $3\mu\text{s}$ max.	I_{GTM}	0.1	Amps
Peak Gate-Power Dissipation @ $I_{\text{GT}} \leq I_{\text{GTM}}$	P_{GM}	0.1	Watts
Average Gate-Power Dissipation	$P_{\text{G(AV)}}$	0.05	Watts
Peak Off-State Current (1) $T_c = 25^\circ\text{C}$ @ Rated Reverse Voltage $T_c = 125^\circ\text{C}$	I_{DRM} I_{RRM}	10 200	μAmps
Maximum On-State Voltage @ $T_c = 25^\circ\text{C}$ and $I_T = 0.3\text{A}$	V_{TM}	1.7	Volts
DC Holding Current (1), Gate Open, $T_c = 25^\circ\text{C}$	I_{HO}	5	mAmps
Critical Rate-Of-Rise of Off-State Voltage (1) Gate Open, $T_c = 110^\circ\text{C}$	Critical dV/dt	5	Volts/ μsec
DC Gate -Trigger Current for Anode (2)	I_{GT}	200	μAmps
DC Gate -Trigger Voltage for Anode (2)	V_{GT}	0.8	Volts
Gate-Controlled Turn-On Time, $t_d + t_R$ $I_{\text{GT}} = 10\text{mA}$, $T_c = 25^\circ\text{C}$	T_{gt}	2.2	μsec
Typical Thermal Resistance Junction to Case	$R_{\theta\text{JC}}$	75	$^\circ\text{C/Watt}$
Storage Temperature Range	T_{STG}	-40 to 150	$^\circ\text{C}$
Operating Temperature Range	T_{OPER}	-40 to 110	$^\circ\text{C}$

Notes:

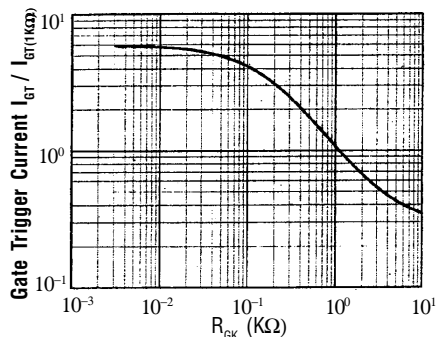
(1) $R_{\text{G-K}} = 1\text{k}\Omega$.(2) Voltage = 7Vdc, $R_L = 100\Omega$, $T_c = 25^\circ\text{C}$.

0.3 Amp Silicon Controlled Rectifiers

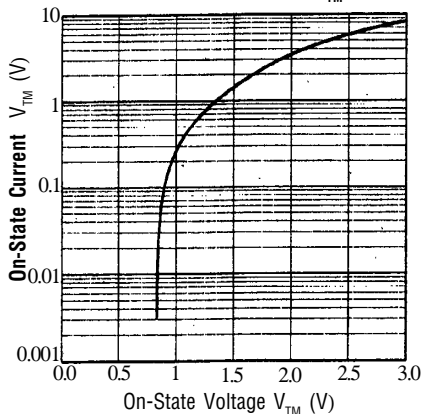
Holding Current vs R_{GK}



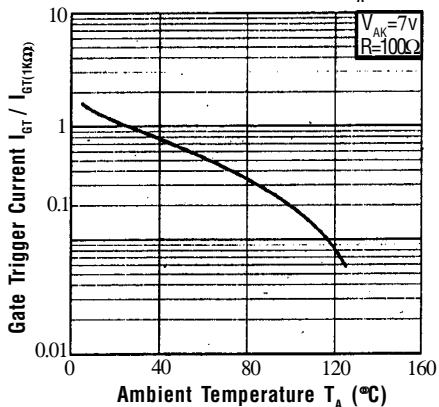
Gate Trigger Current vs R_{GK}



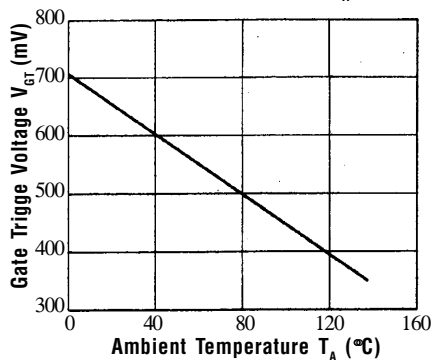
On-State Voltage vs V_{TM}



Gate Trigger Current vs T_A



Gate Trigger Voltage vs T_A



Holding Current vs T_A

