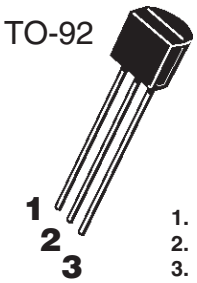
FCI Semiconductor

Data Sheet

0.8 Amp Silicon Controlled Rectifiers

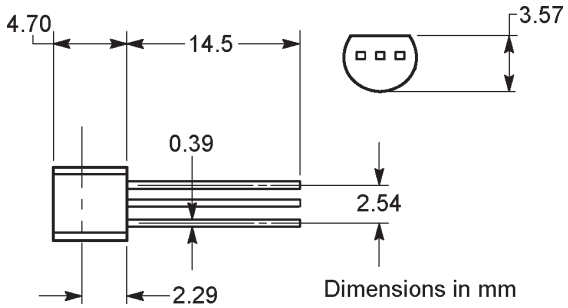
FCR0840~60

Description



1. CATHODE
2. GATE
3. ANODE

Mechanical Dimensions

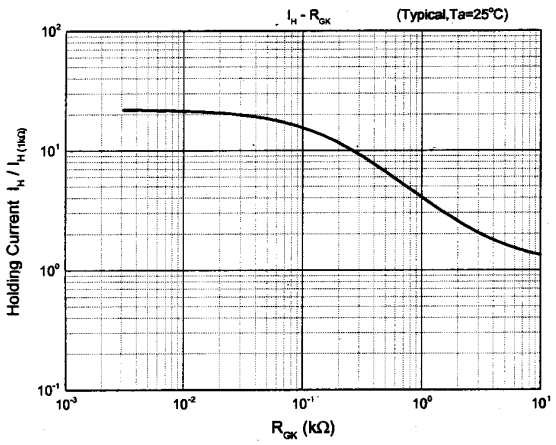


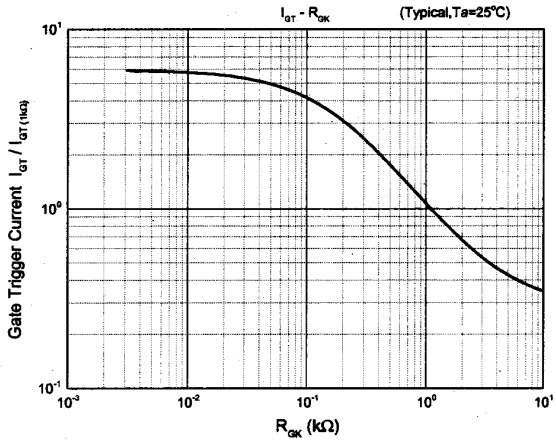
- Driven directly with IC and MOS device.
- Feature proprietary, void-free glass passivate chips.
- Available in voltage ratings from 400 to 600 volts. (VDRM and VRRM)
- Sensitive gate trigger current.
- Designed for high volume, line-powered control application in relay lamp drivers, small motor controls, gate drivers for large thyristors.

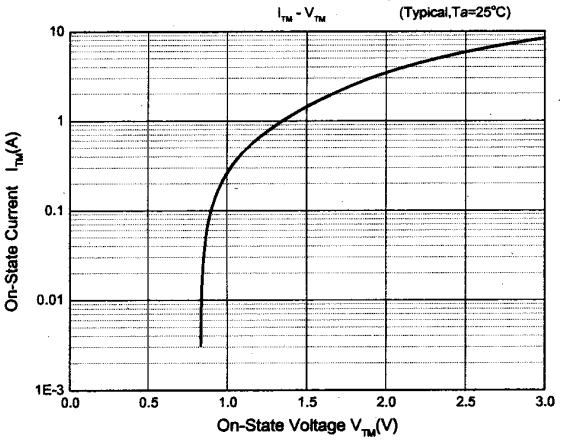
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (Ta=25℃)

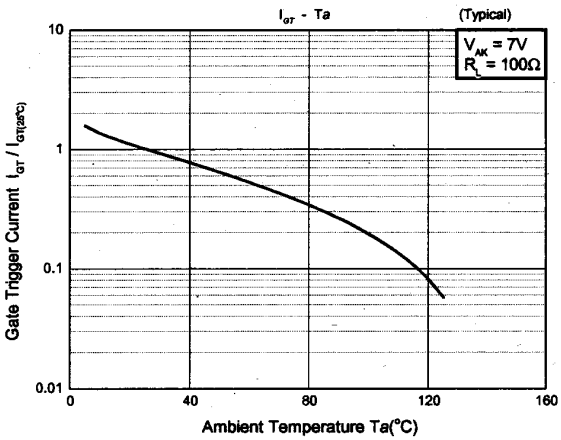
PARAMETERS	SYMBOL	DEVICE NUMBER	RATING	UNITS
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage	* V_{DRM} * V_{RRM}	FCR0840 FCR0860	400 600	VOLT
RMS On-State Current at Ta=57℃ and Conduction Angle of 180º	I_T(RMS)		0.8	AMP
Peak Surge (Non-Repetitive)On-State Current, ½ Cycle ,at 50Hz or 60Hz	I_{TSM}		8	AMP
Peak Gate-Trigger Current for 3μ sec , Max	I_{GTM}		0.8	AMP
Peak Gate-Power Dissipation at IGT≦IGTM	P_{GM}		0.1	WATT
Average Gate-Power Dissipation	P_G(AV)		0.01	WATT
Peak gate reverse voltage	V_{RGM}		10	V
Peak Off-State Current, Ta=25℃ (1) VDRM & VRRM=Max. Rating Ta=125℃ (2)	* I_{DRM} * I_{RRM}		(1) 10 (2) 100	μA MAX
Maximum On-State Voltage. (Peak) At Tc=25℃ and IT =Rated Amps	V_{TM}		1.7	VOLT MAX
DC Holding Current	* I_H		5	mA MAX
Critical Rate-Of-Rise of off-State Voltage Gate Open,Ta=110℃	* Critical dv/dt		5	V/μ sec
DC Gate –Trigger Current for Anode Voltage=7VDC, RL=100Ω	I_{GT}		100	μA MAX
DC Gate –Trigger Voltage for Anode Voltage=7VDC, RL=100Ω	V_{GT}		0.8	VOLT MAX
Gate-Controlled Turn-on Time tD+tR IGT=10mA	Tgt		2.2	μ sec
Thermal Resistance , Junction-to-Case	RθJ-C		75	℃/WATT TYP
Storage Temperature range	Tstg		-40 to + 150	℃
Operating Temperature Range , Tj	Toper		-40 to + 110	℃

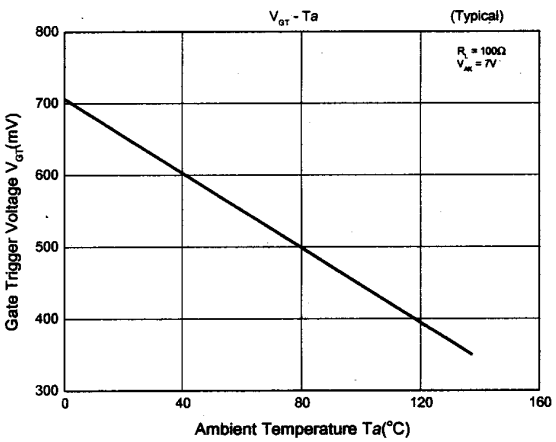
＊ RGK=1KΩ

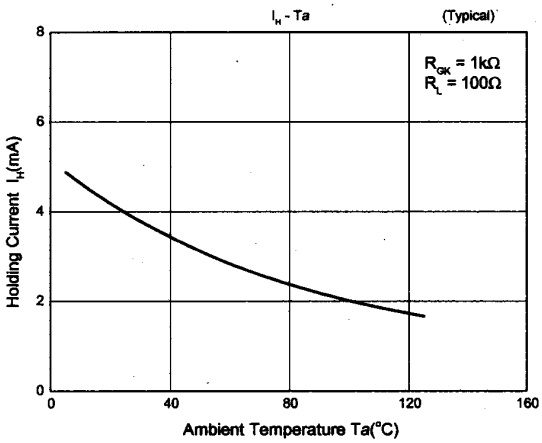

I_H - R_{GK} (Typical,Ta=25°C)
Holding Current I_H / $I_{H(1kΩ)}$
R_{GK} (kΩ)


I_{GT} - R_{GK} (Typical,Ta=25°C)
Gate Trigger Current I_{GT} / $I_{GT(1kΩ)}$
R_{GK} (kΩ)


I_{TM} - V_{TM} (Typical,Ta=25°C)
On-State Current I_{TM}(A)
On-State Voltage V_{TM}(V)


I_{GT} - Ta (Typical)
V_{AK} = 7V
R_L = 100Ω
Gate Trigger Current I_{GT} / $I_{GT(25°C)}$
Ambient Temperature Ta(°C)


V_{GT} - Ta (Typical)
R_L = 100Ω
V_{AK} = 7V
Gate Trigger Voltage V_{GT}(mV)
Ambient Temperature Ta(°C)


I_H - Ta (Typical)
R_{GK} = 1kΩ
R_L = 100Ω
Holding Current I_H(mA)
Ambient Temperature Ta(°C)