



DC COMPONENTS CO., LTD.
DISCRETE SEMICONDUCTORS

**DCR106-3
THRU
DCR106-8**

TECHNICAL SPECIFICATIONS OF SENSITIVE GATE SILICON CONTROLLED RECTIFIERS
VOLTAGE RANGE - 100 to 600 Volts CURRENT - 4.0 Amperes

Description

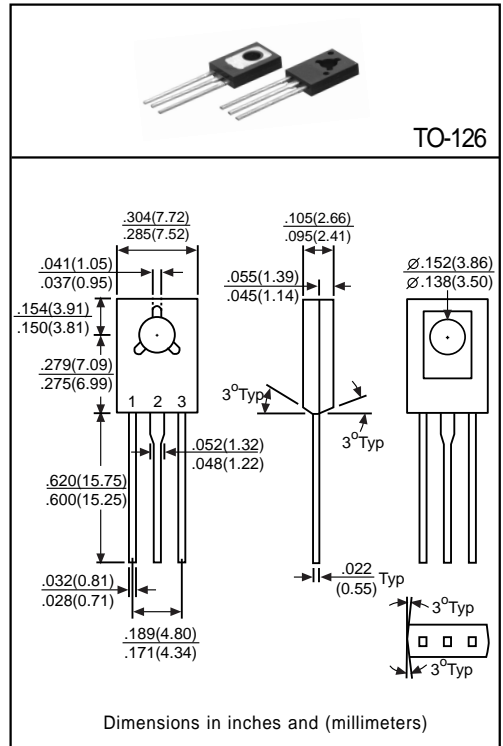
- * Driven directly with IC and MOS device
- * Feature proprietary, void-free glass passivated chips
- * Available in voltage ratings from 100 to 600 volts
- * Sensitive gate trigger current
- * Designed for high volume, line-powered control application in relay lamp drivers, small motor controls, gate drivers for large thyristors

Pinning

1 = Cathode, 2 = Anode, 3 = Gate

Absolute Maximum Ratings($T_A=25^{\circ}C$)

Characteristic	Symbol	Rating	Unit
Peak Repetitive Off-State Voltage and Reverse Voltage	DCR106-3 DCR106-4 DCR106-6 DCR106-8 V_{DRM} , V_{RRM}	100 200 400 600	V
On-State RMS Current ($T_A=57^{\circ}C$, 180° Conduction Angles)	$I_{T(RMS)}$	4.0	A
Peak Non-repetitive Surge Current (1/2 Cycle, Sine Wave 60Hz)	I_{TSM}	25	A
Forward Peak Gate Current	I_{GM}	1.0	A
Forward Peak Gate Power Dissipation	P_{GM}	0.5	W
Forward Average Gate Power Dissipation	$P_{G(AV)}$	0.1	W
Operating Junction Temperature	T_J	-40 to +110	°C
Storage Temperature	T_{STG}	-40 to +150	°C



Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Peak Repetitive Forward or Reverse Off-State Blocking Current	$T_J=25^{\circ}C$	-	-	10	μA	$V_{AK}=\text{Rated } V_{DRM} \text{ or } V_{RRM}$ $R_{GK}=1K\Omega$
	$T_J=110^{\circ}C$	-	-	200		
Peak Forward On-State Voltage	V_{TM}	-	-	2.0	V	$I_{TM}=4A$ Peak
Continuous DC Gate Trigger Current	I_{GT}	-	-	200	μA	$V_{AK}=7V$ DC, $R_L=100\Omega$
Continuous DC Gate Trigger Voltage	V_{GT}	-	-	0.8	V	$V_{AK}=7V$ DC, $R_L=100\Omega$
DC Holding Current	I_H	-	-	5.0	mA	$R_{GK}=1K\Omega$
Critical Rate-of-Rise of Off-State Voltage	dv/dt	-	8.0	-	V/ μS	$R_{GK}=1K\Omega$
Gate Controlled Turn-on Time(t_{d+tr})	T_{gt}	-	2.2	-	μsec	$I_{GT}=10mA$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	-	3.0	-	°C/W	-