



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

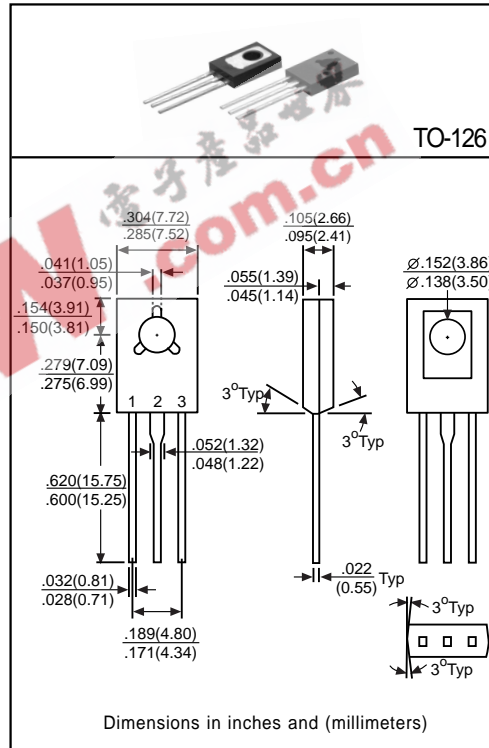
- * Driven directly with IC and MOS device
- * Feature proprietary, void-free glass passivated chips
- * Available in voltage ratings from 100 to 600 volts
- * Sensitive gate trigger current
- * Designed for high volume, line-powered control application in relay lamp drivers, small motor controls, gate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

Pinning

1 = Cathode, 2 = Anode, 3 = Gate

Absolute Maximum Ratings (TA=25°C)

Characteristic	Symbol	Rating	Unit
Peak Repetitive Off-State Voltage and Reverse Voltage	DCR106-3 DCR106-4 DCR106-6 DCR106-8	100 200 400 600	V
On-State RMS Current (TA=57°C, 180° Conduction Angles)	IT(RMS)	4.0	A
Peak Non-repetitive Surge Current (1/2 Cycle, Sine Wave 60Hz)	ITSM	25	A
Forward Peak Gate Current	IGM	1.0	A
Forward Peak Gate Power Dissipation	PGM	0.5	W
Forward Average Gate Power Dissipation	PG(AV)	0.1	W
Operating Junction Temperature	TJ	-40 to +110	°C
Storage Temperature	TSTG	-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	IDRM, IRRM	-	-	10	μA	VAK=Rated VDRM or VRRM RGK=1KΩ
				200		
Peak Forward On-State Voltage	VTM	-	-	2.0	V	ITM=4A Peak
Continuous DC Gate Trigger Current	IGT	-	-	200	μA	VAK=7V DC, RL=100Ω
Continuous DC Gate Trigger Voltage	VGT	-	-	0.8	V	VAK=7V DC, RL=100Ω
DC Holding Current	IH	-	-	5.0	mA	RGK=1KΩ
Critical Rate-of-Rise of Off-State Voltage	dv/dt	-	8.0	-	V/μS	RGK=1KΩ
Gate Controlled Turn-on Time (td+tr)	Tgt	-	2.2	-	μsec	IGT=10mA
Thermal Resistance, Junction to Case	RθJC	-	3.0	-	°C/W	-