



DC COMPONENTS CO., LTD.  
DISCRETE SEMICONDUCTORS

DCR100-3  
THRU  
DCR100-8

TECHNICAL SPECIFICATIONS OF SENSITIVE GATE SILICON CONTROLLED RECTIFIERS  
VOLTAGE RANGE - 100 to 600 Volts  
CURRENT - 0.8 Ampere

Description

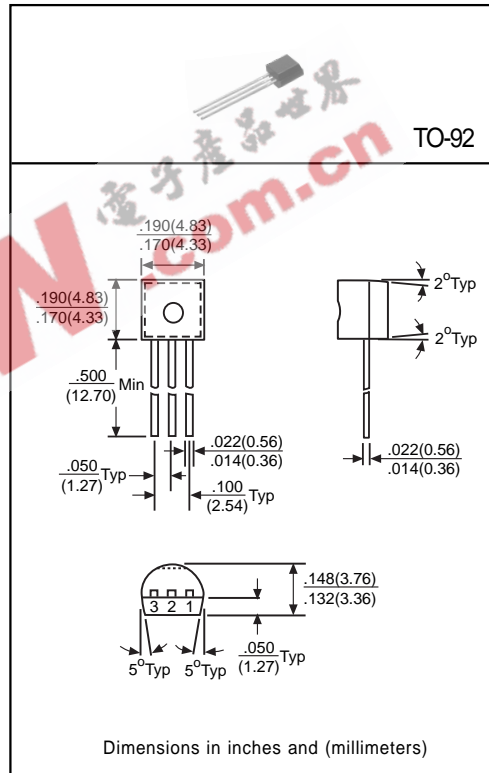
- \* Driven directly with IC and MOS device
- \* Feature proprietary, void-free glass passivated chips
- \* Available in voltage ratings from 100 to 600 volts
- \* Sensitive gate trigger current
- \* Designed for high volume, line-powered control application in relay lamp drivers, small motor controls,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

Pinning

1 = Cathode, 2 = Gate, 3 = Anode

Absolute Maximum Ratings (TA=25°C)

Characteristic	Symbol	Rating	Unit
Peak Repetitive Off-State Voltage and Reverse Voltage	DCR100-3 DCR100-4 DCR100-6 DCR100-8	100 200 400 600	V
On-State RMS Current (TA=57°C, 180° Conduction Angles)	IT(RMS)	0.8	A
Peak Non-repetitive Surge Current (1/2 Cycle, Sine Wave 60Hz)	ITSM	8	A
Forward Peak Gate Current (For 3μ sec.)	IGM	0.8	A
Forward Peak Gate Power Dissipation	PGM	0.1	W
Forward Average Gate Power Dissipation	PG(AV)	0.01	W
Reverse Peak Gate Voltage	VGRM	6.0	V
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
Peak Forward On-State Voltage	VTM	-	-	1.7	V	ITM=0.8A Peak, Tc=25°C
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	-	-	10	mA	Rgk=1KΩ, Gate Open
Critical Rate-of-Rise of Off-State Voltage	dv/dt	-	5	-	V/μS	Rgk=1KΩ, Gate Open
Gate Controlled Turn-on Time (td+tr)	Tgt	-	2.2	-	μsec	IGT=10mA
Thermal Resistance, Junction to Case	RθJC	-	75	-	°C/W	-