



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

ML1225
XL1225

TECHNICAL SPECIFICATIONS OF SENSITIVE GATE SILICON CONTROLLED RECTIFIERS

VOLTAGE RANGE - 300 to 380 Volts CURRENT - 0.8 Ampere

Description

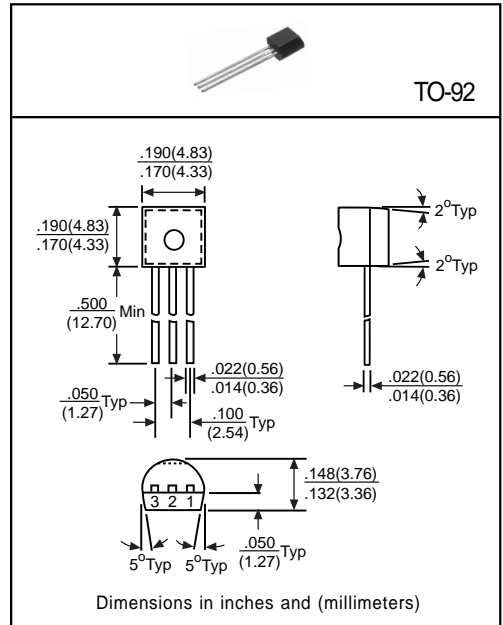
These Silicon Controlled Rectifiers are high performance planar diffused PNP devices. They are intended for low cost, high volume applications.

Pinning

- 1 = Cathode
- 2 = Gate
- 3 = Anode

Absolute Maximum Ratings (T_A=25°C)

Characteristic	Symbol	Rating	Unit
Peak Repetitive Off-State Voltage (R _{GK} =1KΩ)	V _{DRM}	300 380	V
On-State RMS Current (T _C =40°C)	I _{T(RMS)}	0.8	A
Peak Gate Current (10μs Max)	I _{GM}	1	A
Gate Power Dissipation (20ms Max)	P _{G(AV)}	0.1	W
Reverse Peak Gate Voltage	V _{GRM}	8	V
Operating Junction Temperature	T _J	-40 to +125	°C
Storage Temperature	T _{STG}	-40 to +125	°C



Electrical Characteristics

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Peak Repetitive Forward Off-State Blocking Current	I _{DRM}	-	-	5	μA	V _{AK} =Rated V _{DRM} or V _{RRM} R _{GK} =1KΩ
		-	-	100		
Peak Forward On-State Voltage	V _{TM}	-	-	1.4	V	I _{TM} =0.4A Peak, T _J =25°C I _{TM} =0.8A Peak, T _J =25°C
		-	-	2.2		
Continuous DC Gate Trigger Current	I _{GT}	-	-	200	μA	V _{AK} =7V DC, R _L =100Ω
Continuous DC Gate Trigger Voltage	V _{GT}	-	-	0.8	V	V _{AK} =7V DC, R _L =100Ω
DC Holding Current	I _H	-	-	5	mA	R _{GK} =1KΩ, Gate Open
DC Latching Current	I _L	-	-	6	mA	R _{GK} =1KΩ, Gate Open
Critical Rate-of-Rise of Off-State Voltage	dv/dt	25	-	-	V/μs	V _D =0.67V _{DRM} , R _{GK} =1KΩ, T _J =125°C
Critical Rate-of-Rise of Off-State Current	di/dt	30	-	-	A/μs	I _G =10mA, di _G /dt=0.1A/μs, T _J =125°C
Gate Controlled Delay Time	T _{gd}	-	-	0.5	μsec	I _G =10mA, di _G /dt=0.1A/μs
Thermal Resistance, Junction to Case	R _{θJC}	100	-	-	°C/W	-

Classification of I_{GT}

Rank	AA	AB	AC	AD	B	C
Range	ML1225 10-18 μA	12-23 μA	17-28 μA	22-55 μA	45-105 μA	-
	XL1225 10-18 μA	12-23 μA	17-28 μA	22-55 μA	45-105 μA	95-155 μA