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DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

MML1225
MXL1225

TECHNICAL SPECIFICATIONS OF SENSITIVE GATE SILICON CONTROLLED RECTIFIERS

VOLTAGE RANGE - 300 to 380 Volts *CURRENT - 0.8 Ampere*

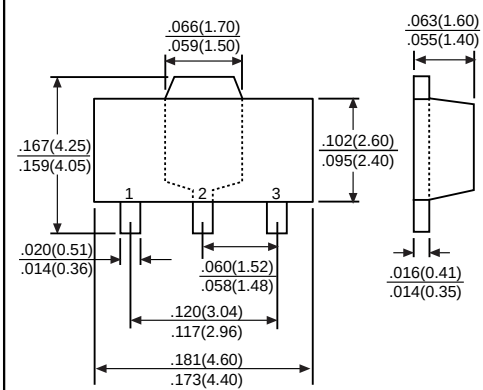
Description

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

Pinning

1 = Gate
2 = Anode
3 = Cathode

SOT-89



Dimensions in inches and (millimeters)

Absolute Maximum Ratings(T_A=25°C)

Characteristic		Symbol	Rating	Unit
Peak Repetitive Off-State Voltage(R_{GK}=1KΩ)	MML1225 MXL1225	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	T_A=25°C	I_{DRM}	-	-	5	μA	V_{AK}=Rated V_{DRM} or V_{RRM} R_{GK}=1KΩ
	T_A=125°C		-	-	100		
Peak Forward On-State Voltage		V_{TM}	-	-	1.4	V	I_{TM}=0.4A Peak, T_J=25°C
			-	-	2.2		I_{TM}=0.8A Peak, T_J=25°C
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		$R_{\theta JC}$	100	-	-	°C/W	-

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