SCR XL 1225 / ML 1225

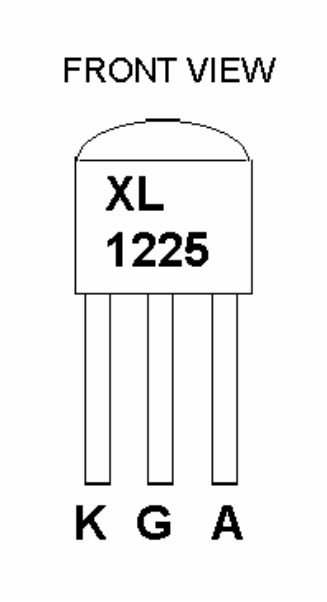
0.6A 300V (***ML1225***) / 400V (***XL1225***), I_{GT} < 200 μA

DESCRIPTION

The 1225 Silicon Controlled Rectifiers are high performance diffused PNPN devices. These parts are intended for low cost and high volume applications.

ABSOLUTE MAXIMUM RATING

Parameter	Part No.	Symbol	Min.	Max	Unit	Test Conditions
Repetitive Peak Off State Voltage	XL 1225 ML 1225	V_{DRM} V_{DRM}	400 300		V V	Tj=40℃ to 125℃ (RGK=1K)
On-State Current		I_{T}(RMS)	0.5		A	T_C=40℃
Average On-State Current		I_T (AV)	0.5		A	Half Cycle=180℃, T_C=40℃
Peak Reverse Gate Voltage		V_{GRM}	8		V	I_{GR}=10μA
Peak Gate Current		I_{GM}	1		A	10μs max.
Gate Dissipation		PG (AV)	0.1		W	20 ms max.
Operating Temperature		T_j	-40	125	℃	
Storage Temperature		T_{stg}	-40	125	℃	



PIN ASSIGNMENT (TO-92 PACKAGE)

K : Cathode
G : Gate
A : Anode

ELECTRICAL CHARACTERISTICS (T_A=25℃)

Parameter	Symbol	Min.	Max	Unit	Test Conditions
Off-State Leakage Current	I_{DRM}		0.1	mA	@V_{DRM} (RGK=1K)T_j=125℃
Off-State Leakage Current	I_{DRM}		1.0	μA	@V_{DRM} (RGK=1K)T_j=25℃
On-State Voltage	V_T		1.93	V	at I_T=0.8A, T_j=25 ℃
On-State Threshold Voltage	$V_{T(TO)}$		0.95	V	T_j=125℃
On-State Slops Resistance	r_T		600	m	T_j=125℃
Gate Trigger Current	I_{GT}		200	μA	V_D=7V
Gate Trigger Voltage	V_{GT}		0.8	V	V_D=7V
Holding Current	I_H		5	mA	RGK=1K(ohm)
Latching Current	I_L		6	mA	RGK=1K(ohm)
Critical Rate of Voltage Rise	dv/dt	25		V/μs	V_D=0.67≠V_{DRM}(RGK=1K), T_j=125℃
Critical Rate of Current Rise	di/dt	30		A/μs	I_G=10mA,diG/dt=0, 1A/μs, T_j=125℃
Gate Controlled Delay Time	tgd		500	ns	I_G=10mA,diG/dt=0.1A/μs
Commutated Turn-Off Time	tg		200	μs	T_C=85℃, V_D=0.67≠V_{DRM} V_R=35V, I_T=$I_{T(AV)}$
Thermal Resistance junc. to case	R⊖jc	100	K/W		
Thermal Resistance junc. to amb.	R⊖ja	200	K/W		