

華昕電子 *HI-SINCERITY* **SCR**

XL 1225 / ML 1225

0.6A 300/400 VOLTAGE **SCR** $I_{GT} < 200 \mu A$

DESCRIPTION

The 1225 Silicon Controlled Rectifiers are high performance diffused PNP 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	T _j =40°C to 125°C (RGK=1K)
On-State Current		I _T (RMS)	0.5		A	T _c =40°C
Average On-State Current		I _T (AV)	0.5		A	Half Cycle=180°C, T _c =40°C
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	°C	
Storage Temperature		T _{stg}	-40	125	°C	

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$)

Parameter	Symbol	Min.	Max	Unit	Test Conditions
Off-State Leakage Current	I_{DRM}		0.1	mA	@ V_{DRM} (RGK=1K) $T_j=125^\circ\text{C}$
Off-State Leakage Current	I_{DRM}		1.0	μA	@ V_{DRM} (RGK=1K) $T_j=25^\circ\text{C}$
On-State Voltage	V_T		1.93	V	at $I_T=0.8\text{A}$, $T_j=25^\circ\text{C}$
On-State Threshold Voltage	$V_{T(TO)}$		0.95	V	$T_j=125^\circ\text{C}$
On-State Slops Resistance	r_T		600	m	$T_j=125^\circ\text{C}$
Gate Trigger Current	I_{GT}		200	μA	$V_D=7\text{V}$
Gate Trigger Voltage	V_{GT}		0.8	V	$V_D=7\text{V}$
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	$V_D=0.67 \neq V_{DRM}$ (RGK=1K), $T_j=125^\circ\text{C}$
Critical Rate of Current Rise	di/dt	30		A/ μs	$I_G=10\text{mA}$, $di_G/dt=0$, $1\text{A}/\mu\text{s}$, $T_j=125^\circ\text{C}$
Gate Controlled Delay Time	t_{gd}		500	ns	$I_G=10\text{mA}$, $di_G/dt=0.1\text{A}/\mu\text{s}$
Commutated Turn-Off Time	t_g		200	μs	$T_C=85^\circ\text{C}$, $V_D=0.67 \neq V_{DRM}$ $V_R=35\text{V}$, $I_T=I_T(AV)$
Thermal Resistance junc. to case	$R_{\theta jc}$	100	K/W		
Thermal Resistance junc. to amb.	$R_{\theta ja}$	200	K/W		

PIN ASSIGNMENT (TO-92 PACKAGE)

K : Cathode

G : Gate

A : Anode

FRONT VIEW

