

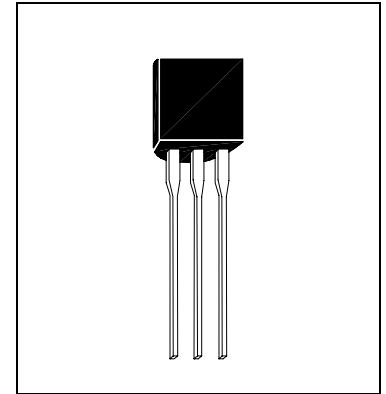


# HML1225/HXL1225

0.8A 300/380 VOLTAGE SCRS IGT<200uA

## Description

The HML1225/HXL1225 series silicon controlled rectifiers are high performance planner diffused PNP devices. These parts are intended for low cost high volume applications.



## Absolute Maximum Ratings (Ta=25°C)

Parameter	Part No.	Symbol	Min	Max	Unit	Test Conditions
Repetitive Peak Off State Voltage	HXL1225	VDRM	380	-	V	Tj=40°C to 125°C (RGK=1K)
	HML1225	VDRM	300	-	V	
On-State Current		IT(rms)	0.8	-	A	TC=40°C
Average On-State Current		IT(AV)	0.5	-	A	Half Cycle=180°,TC=40°C
Peak Reverse Gate Voltage		VGRM	8	-	V	IGR=10uA
Peak Gate Current		IGM	1	-	A	10us max
Gate Dissipation		PG(AV)	0.1	-	W	20ms max
Operating Temperature		Tj	-40	125	°C	
Storage Temperature		Tstg	-40	125	°C	
Soldering Temperature		Tsld	-	250	°C	1.6mm from case 10s max

## Classification Of IGT

Rank	AA	AB	AC	AD	B	C
HML1225	10-18 uA	12-23 uA	17-28 uA	22-55 uA	45-105 uA	-
HXL1225	10-18 uA	12-23 uA	17-28 uA	22-55 uA	45-105 uA	95-155 uA

## Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Min	Max	Unit	Test Conditions
Off-State Leakage Current	IDRM	-	0.1	mA	@VDRM (RGK=1K), Tj=125°C
Off-State Leakage Current	IDRM	-	5	uA	@VDRM (RGK=1K), Tj=25°C
On-State Voltage	VT	-	1.4	V	at IT=0.4A, Tj=25°C
		-	2.2	V	at IT=0.8A, Tj=25°C
On-State Threshold Voltage	VT(TO)	-	0.95	V	Tj=125°C
On-State Slops Resistance	rT	-	600	Ohm	Tj=125°C
Gate Trigger Current	IGT	-	200	uA	VD=7V
Gate Trigger Voltage	VGT	-	0.8	V	VD=7V
Holding Current	IH	-	5	mA	RGK=1K(ohm)
Latching Current	IL	-	6	mA	RGK=1K(ohm)
Critical Rate of Voltage Rise	dv/dt	25	-	V/us	VD=0.67*VDRM(RGK=1K), Tj=125°C
Critical Rate of Current Rise	di/dt	30	-	A/us	IG=10mA,diG/dt=0.1A/us, Tj=125°C
Gate Controlled Delay Time	tgd	-	500	ns	IG=10mA,diG/dt=0.1A/us
Commutated Turn-off Time	tg	-	200	us	Tc=85°C,VD=0.67*VDRM VR=35V,IT=IT(AV)
Thermal Resistance junc.to case	Rθjc	100	-	K/W	
Thermal Resistance junc. to amb	Rθja	200	-	K/W	



### TO-92 Dimension

**3-Lead TO-92 Plastic Package**  
HSMC Package Code : A

**Marking :**

HSMC Logo → □ □ □ □ ← Product Series  
 Part Number → □ □ □ □ □ □  
 Date Code → □ □ □ □ □ □ ← Rank  
Laser Mark

HSMC Logo  
 Product Series  
 Part Number → □ □ □ □ □ □  
Ink Mark

Style : Pin 1.Cathode 2.Gate 3. Anode

\*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1704	0.1902	4.33	4.83	G	0.0142	0.0220	0.36	0.56
B	0.1704	0.1902	4.33	4.83	H	-	*0.1000	-	*2.54
C	0.5000	-	12.70	-	I	-	*0.0500	-	*1.27
D	0.0142	0.0220	0.36	0.56	α1	-	*5°	-	*5°
E	-	*0.0500	-	*1.27	α2	-	*2°	-	*2°
F	0.1323	0.1480	3.36	3.76	α3	-	*2°	-	*2°

**Notes :** 1.Dimension and tolerance based on our Spec. dated Apr. 25,1996.  
 2.Controlling dimension : millimeters.  
 3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.  
 4.If there is any question with packing specification or packing method, please contact your local HSMC sales office.

**Material :**

- Lead : 42 Alloy ; solder plating
- Mold Compound : Epoxy resin family, flammability solid burning class:UL94V-0

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