

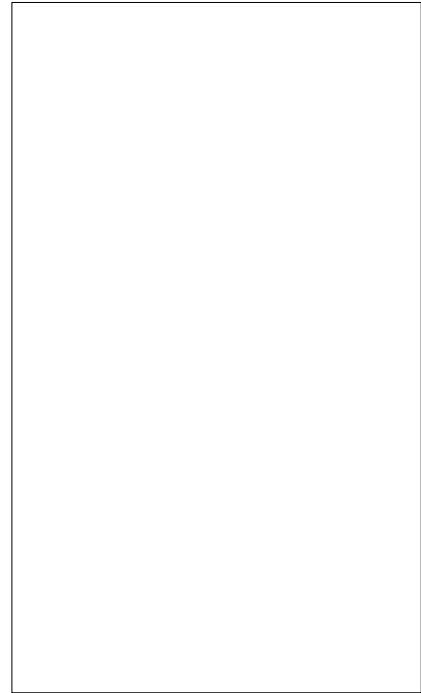


**JCT812K 12A SCR**

Rev.A.1.0

## DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT812K of silicon controlled rectifiers provides high dV/dt rate with strong resistance to electromagnetic interference. It is especially recommended for use on solid state relay, motorcycle, power charger, T-tools etc. Package TO-252 is RoHS compliant.



K

gate power dissipation ( $T_j=125^\circ\text{C}$ )	$P_{G(AV)}$	1	W
power	$P_{GM}$	10	W
se voltage (non-repetitive, off-state; FIG.8)	$V_{pp}$	0.5	kV

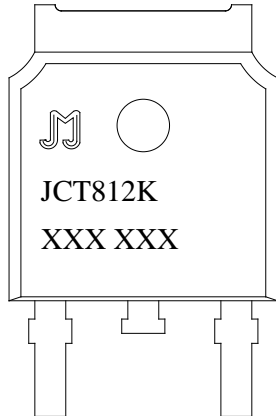
**AL CHARACTERISTICS** ( $T_j=25^\circ\text{C}$  unless otherwise specified)

Test Condition	Value			Unit
	MIN.	TYP.	MAX.	
$V_D=12\text{V}$ $R_L=33$	-	-	15	mA
	-	-	1	V

## ORDERING INFORMATION

	<b>J</b>	<b>CT</b>	<b>8</b>	<b>12</b>	<b>K</b>	<b>-/</b>
JieJie Microelectronics Co., Ltd.		SCRs				Blank:Tube -TR:Tape & Reel
			8:V <sub>DRM</sub> /V <sub>RRM</sub> ≥800V		K:TO-252	
				I <sub>T(RMS)</sub> :12A		

## MARKING



**FIG.1** Maximum power dissipation versus RMS on-state current



**FIG.2:** RMS on-state current versus case temperature

FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature

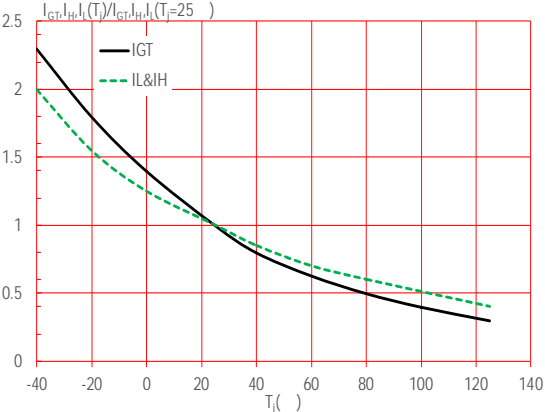
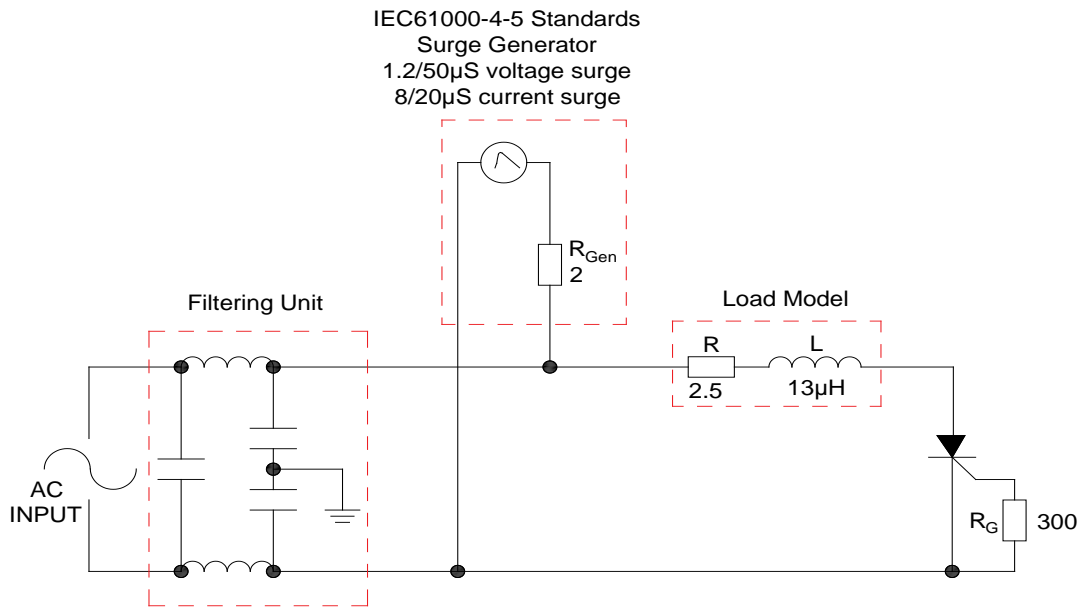
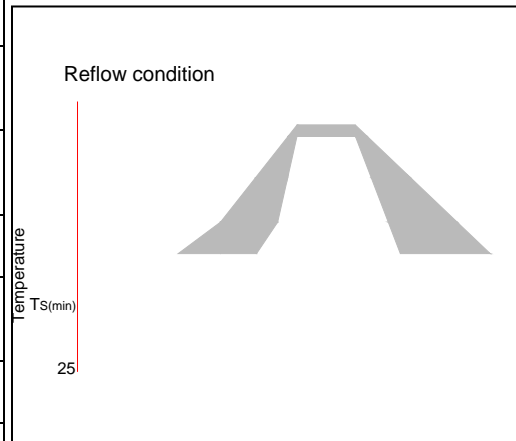


FIG.8: Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.



**SOLDERING PARAMETERS**

Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min ( $T_{s(min)}$ )	+150 $^{\circ}$ C
	-Temperature Max( $T_{s(max)}$ )	+200 $^{\circ}$ C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak)		3 $^{\circ}$ C/sec. Max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3 $^{\circ}$ C/sec. Max
Reflow	-Temperature( $T_L$ ) (Liquidus)	+217 $^{\circ}$ C
	-Temperature( $t_L$ )	60-150 secs.
Peak Temp ( $T_p$ )		+260(+0/-5) $^{\circ}$ C
Time within 5 $^{\circ}$ C of actual Peak Temp ( $t_p$ )		20-40secs.
Ramp-down Rate		6 $^{\circ}$ C/sec. Max
Time 25 $^{\circ}$ C to Peak Temp ( $T_p$ )		8 min. Max
Do not exceed		+260 $^{\circ}$ C



**ORDERING INFORMATION**

Order code	Voltage $V_{DRM}/V_{RRM}$ (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT812K	800	15	TO-252	80	Tube
JCT812K-TR				2,500	Tape & Reel

**Document Revision History**

Date	Revision	Changes
Apr.13, 2023	A.1.0	Last update

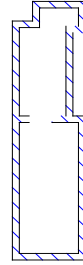
## PACKAGE MECHANICAL DATA

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Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.10		2.50	0.083		0.098
A2	0		0.15	0		0.006
B	0.66		0.86	0.026		0.034
B2	5.18		5.48	0.202		0.216
C	0.40		0.60	0.016		0.024
C2	0.44		0.58	0.017		0.023
D	5.90		6.30	0.232		0.248
D1						
E	6.40		6.80	0.252		0.268
E1	4.63			0.182		
G	4.47		4.67	0.176		0.184
H	9.50		10.70	0.374		0.421
L	1.09		1.21	0.043		0.048
L2	1.35		1.65	0.053		0.065
V1		7°			7°	
V2	0°		6°	0°		6°



**DELIVERY MODE**



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