

**JX014V 1.25A Sensitive SCR**

Rev.A.1.0

DESCRIPTION:

The JX014V SCR provides high dV/dt rate with strong resistance to electromagnetic interface. It is especially recommended for use on residual current circuit breaker, straight hair, igniter etc. Package SOT-223 is RoHS compliant.

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	1.25	A
V_{DRM} / V_{RRM}	1250	V
I_{GT}	200	A

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	°C
Operating junction temperature range	T_j	-40-110	°C
Repetitive peak off-state voltage ($T_j=25^\circ\text{C}$)	V_{DRM}	1250	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	1250	V
Average on-state current ($T_c \leq 80^\circ\text{C}$)	$I_{T(AV)}$	0.8	A
RMS on-state current ($T_c \leq 80^\circ\text{C}$)	$I_{T(RMS)}$	1.25	A
Non repetitive surge peak on-state current ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I_{TSM}	25	A
Non repetitive surge peak on-state current ($t_p=8.3\text{ms}$, $T_j=25^\circ\text{C}$)		28	
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I^2t	3.1	A^2s

Critical rate of rise of on-state current 0.004 T_v

JX014V

Peak gate

Peak pulse
($T_j=25^\circ\text{C}$;

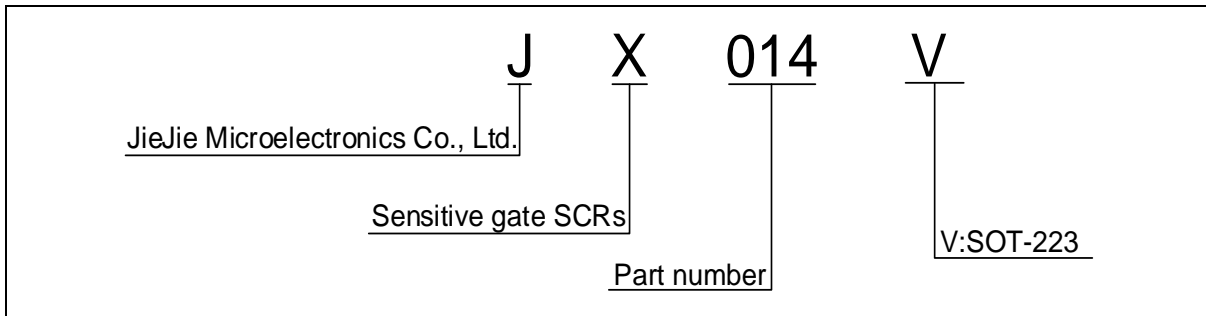
ELECTRICAL

Symbol
I_{GT}
V_{GT}
V_{GD}
I_L
I_H
dV/dt
t_{on}
t_{off}

STATIC CHARACTERISTICS

Symbol	Parameter	Value(MAX.)	Unit
V_{TM}	$I_T=2\text{A } t_p=380 \text{ s}$ $T_j=25^\circ\text{C}$		

ORDERING INFORMATION



MARKING

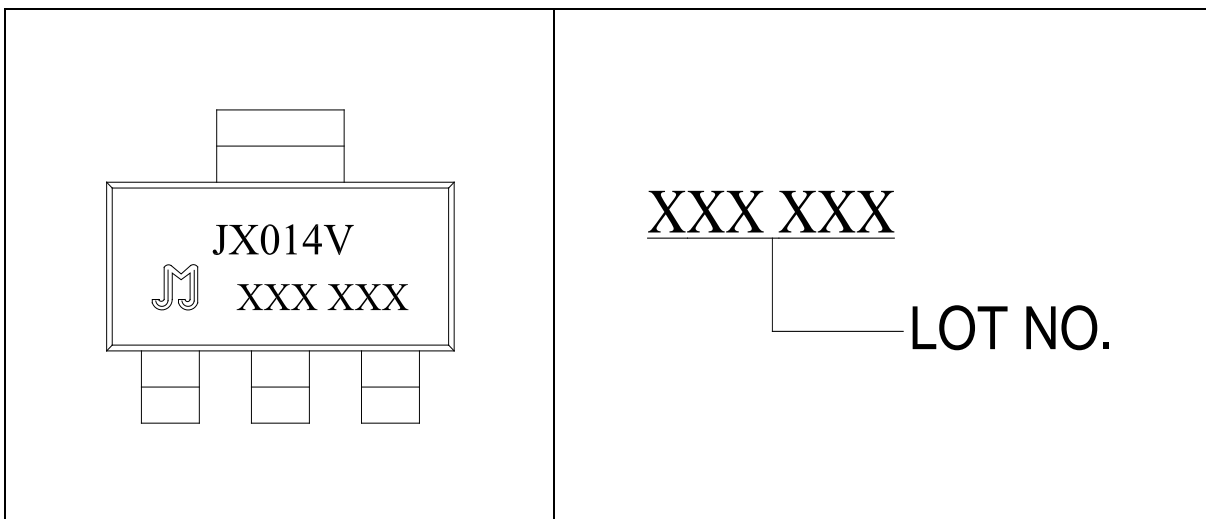


FIG.1 Maximum power dissipation versus RMS on-state current

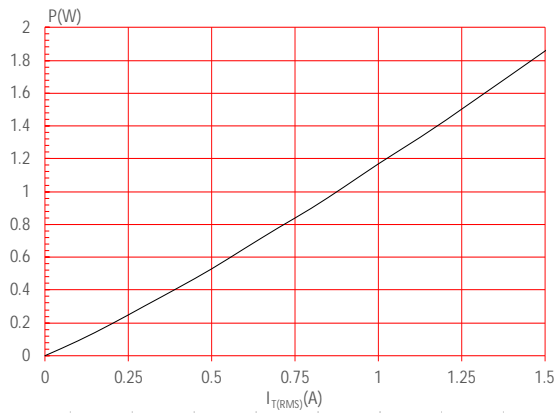


FIG.2: RMS on-state current versus case temperature

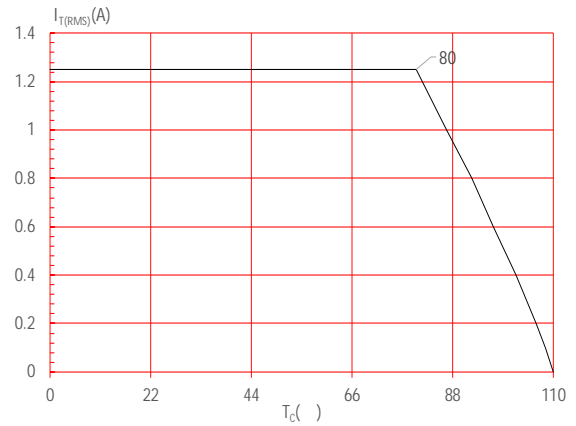


FIG.3: RMS on-state current versus ambient temperature (printed circuit board)

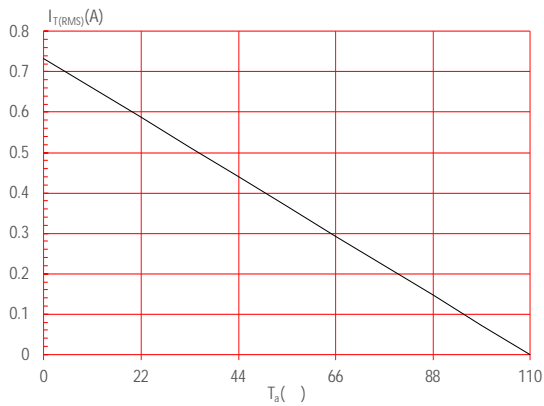


FIG.4: Surge peak on-state current versus number of cycles

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

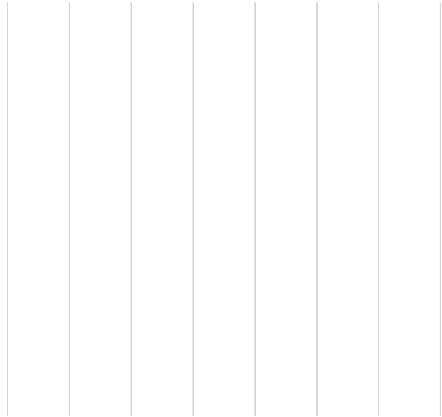
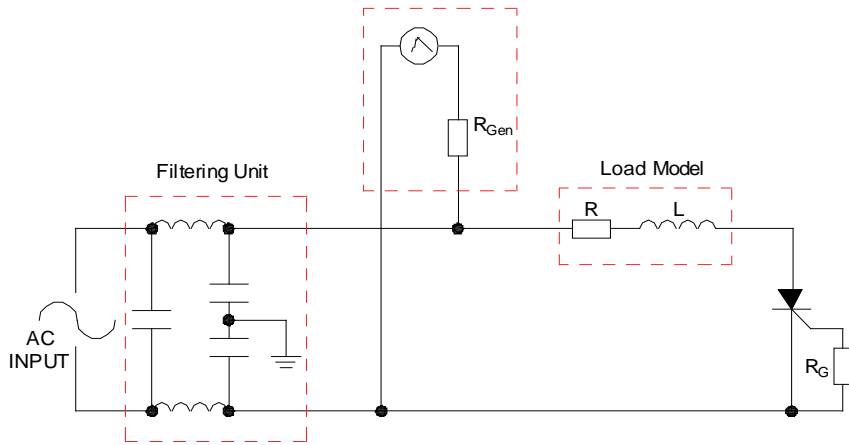


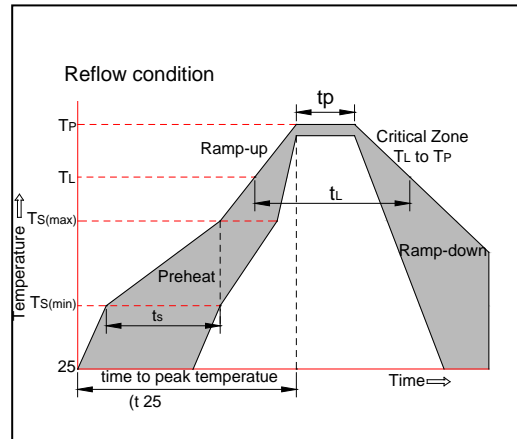
FIG.8: Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.

IEC61000-4-5 Standards
Surge Generator



SOLDERING PARAMETERS

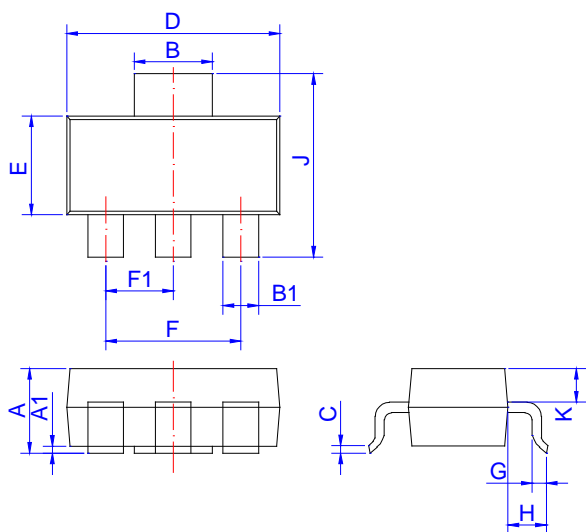
Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max ($T_{s(max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs.
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow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



ORDERING INFORMATION

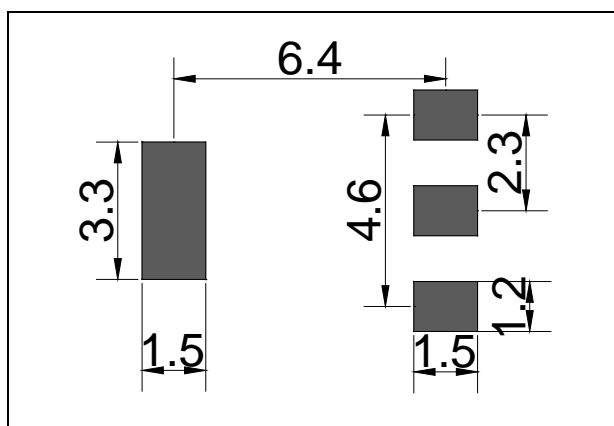
Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT)	
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PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.5	1.6	1.8	0.059	0.063	0.071
A1	0.01	0.06	0.10	0.001	0.002	0.004
B	2.9	3.0	3.1	0.114	0.118	0.122
B1	0.6	0.7	0.8	0.024	0.028	0.031
C	0.22	0.26	0.32	0.009	0.010	0.013
D	6.3	6.5	6.7	0.248	0.256	0.264
E	3.3	3.5	3.7	0.130	0.138	0.146
F	4.4		4.8	0.173		0.189
F1	2.2		2.4	0.087		0.094
G	0.5		1.0	0.020		0.039
H	1.5	1.75	2.0	0.059	0.069	0.079
J	6.7	7.0	7.3	0.264	0.276	0.287
K	0.8	0.9	1.0	0.031	0.035	0.039


FOOTPRINT-SOT-223 (dimensions in mm)



DELIVERY MODE

Ref.

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