



JHX015V 1.5A SCR

Rev.A.1.1

DESCRIPTION:

With high ability to withstand the shock loading of large current, JHX015V SCR 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 SOT-223 is RoHS compliant.



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	1.5	A
V_{DRM}/V_{RRM}	1600	V
I_{GT}	≤ 3	mA

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
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Storage junction temperature range

T_{stg}

-40-150

-40 Tw 1

Peak gate power	P_{GM}	2	W
Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.8)	V_{pp}	1.5	kV

ELECTRICAL CHARACTERISTICS ($T_j=25$ unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	$V_D=12V$ $R_L=33\Omega$	-	-	3	mA
V_{GT}		-	-	1.3	V
V_{GD}	$V_D=V_{DRM}$ $T_j=110$ $R_L=3.3k\Omega$	0.2	-	-	V
I_L	$I_G=1.2I_{GT}$	-	-	15	mA
I_H	$I_T=500mA$	-	-	10	mA
dV/dt	$V_D=1070V$ $T_j=110$ $R_{GK}=1k\Omega$	100	-	-	V/ μs
	$V_D=1070V$ $T_j=110$ $R_{GK}=220\Omega$	500	-	-	
t_{on}	$I_G=10mA$ $I_A=40mA$ $I_R=4mA$ $T_j=25$	-	2	-	μs
t_{off}		-	50	-	μs

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_{TM}=3A$ $t_p=380\mu s$	$T_j=25$	1.7	V
V_{TO}	Threshold voltage	$T_j=110$	0.91	V
R_D	Dynamic resistance	$T_j=110$	167	m Ω
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25$	5	μA
I_{RRM}		$T_j=110$	0.2	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case(DC)	25	/W
$R_{th(j-a)}$	junction to ambient (DC)	65	/W

ORDERING INFORMATION

<u>J</u>	<u>H</u>	<u>X</u>	<u>015</u>	<u>V</u>
JieJie Microelectronics Co., Ltd.	High voltage	Small gate trigger SCRs	$I_{T(RMS)}:1.5A$	V:SOT-223

MARKING

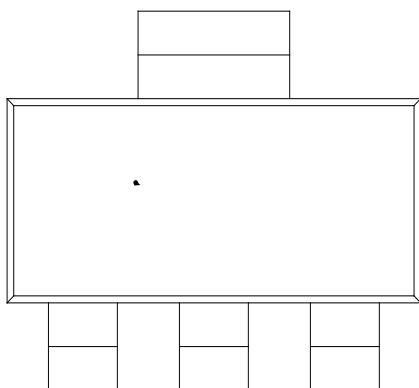


FIG.1: Maximum power dissipation versus RMS on-state current

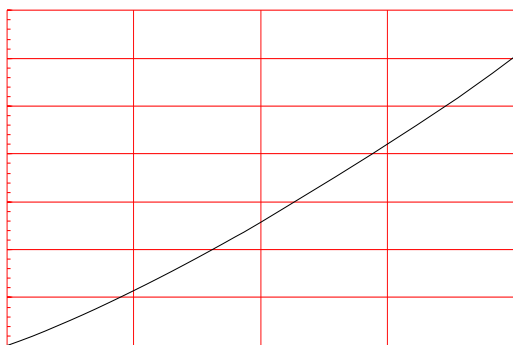


FIG.2: RMS on-state current versus case temperature

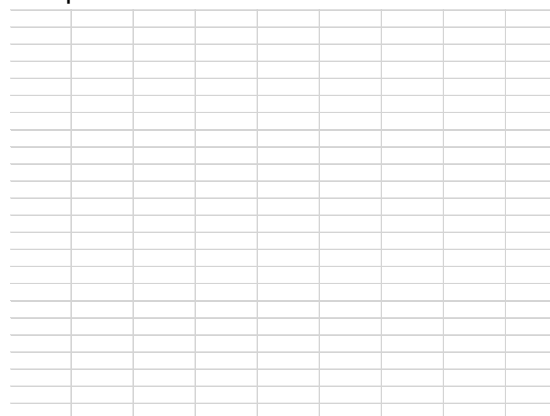
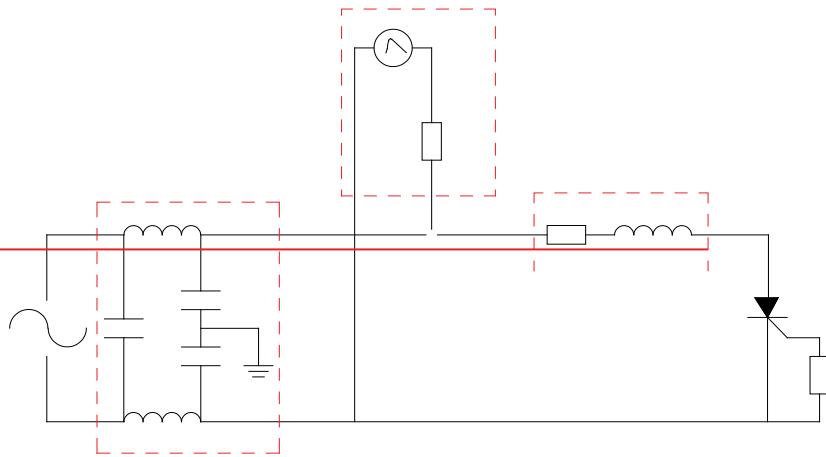


FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature



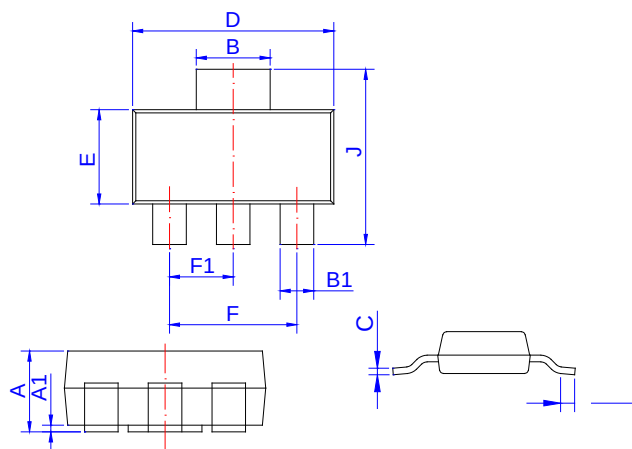
FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.



ORDERING INFORMATION

Order code	Voltage $V_{\text{DRM}}/V_{\text{RRM}}$ (V)	IGT(mA)	Package	
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PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.50	1.60	1.80	0.059	0.063	0.071
A1	0.01	0.06	0.10	0.001	0.002	0.004
B	2.90	3.00	3.10	0.114	0.118	0.122
B1	0.60	0.70	0.80	0.024	0.028	0.031
C	0.22	0.26	0.32	0.009	0.010	0.013
D	6.30	6.50	6.70	0.248	0.256	0.264
E	3.30	3.50	3.70	0.130	0.138	0.146
F	4.40		4.80	0.173		0.189
F1	2.20		2.40	0.087		0.094
G	0.50		1.00	0.020		0.039
H	1.50	1.75	2.00	0.059	0.069	0.079
J	6.70	7.00	7.30	0.264	0.276	0.287
K	0.80		1.00	0.031		0.039

DELIVERY MODE

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.

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