JX040H 4A Sensitive SCR

Rev.A.1.1

DESCRIPTION:

The JX040H 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 TO-251 is RoHS compliant.

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	4	A
V_{DRM} /V_{RRM}	600	V
I_{GT}	200	A

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	
Operating junction temperature range	T_j	-40-125	
Repetitive peak off-state voltage (T_j=25)	V_{DRM}	600	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	600	V
Average on-state current (T_C 93)	$I_{T(AV)}$	2.5	A
RMS on-state current (T_C 93)	$I_{T(RMS)}$	4	A
Non repetitive surge peak on-state current (t_p=10ms , T_j=25)	I_{TSM}	40	A
Non repetitive surge peak on-state current (t_p=8.3ms , T_j=25)		44	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	8	A^2s
Critical rate of rise of on-state curren0.004 Tw :			

Peak gate power	P_{GM}	5	W
Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.7)	V_{pp}	0.5	kV

NOTE 1: Operating junction temperature T_j is up to 125 when a resistor 1k is connected between Gate and Cathode. Without this resistor, the T_j is up to 110 only.

ELECTRICAL CHARACTERISTICS (T_j=25 unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	V_D=12V R_L=33	-	50	200	A
V_{GT}		-	0.6	0.8	V
V_{GD}	V_D=V_{DRM} T_j=125	0.2	-	-	V
I_L	I_G=1.2 I_{GT}	-	-	6	mA
I_H	I_T=0.05A	-	-	5	mA
dV/dt	V_D=400V T_j=125 R_{GK}=1k	50	-	-	V s
	V_D=400V T_j=125 R_{GK}=	200	-	-	
t_{on}	I_G=10mA I_A=20mA I_R=2mA T_j=25	-	2	-	s
t_{off}		-	50	-	s

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_T=8A t_p=380 s	T_j=25	1.6	V
V_{TO}	Threshold voltage	T_j=125	0.8	V
R_D	Dynamic Resistance	T_j=125	0.1	
I_{DRM}	V_D=V_{DRM} V_R=V_{RRM}	T_j=25	5	A
I_{RRM}		T_j=125	0.5	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (DC)	6	/W
$R_{th(j-a)}$	junction to ambient (DC)	120	/W

NG INFORMATION

J X 040 H

- J: Jie Microelectronics Co., Ltd.
- X: Sensitive gate SCRs
- 040: $I_{T(RMS)}$:4A
- H: H:TO-251

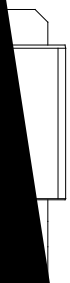
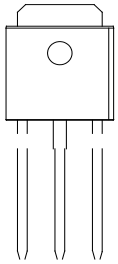


FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.

PACKAGE MECHANICAL DATA



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