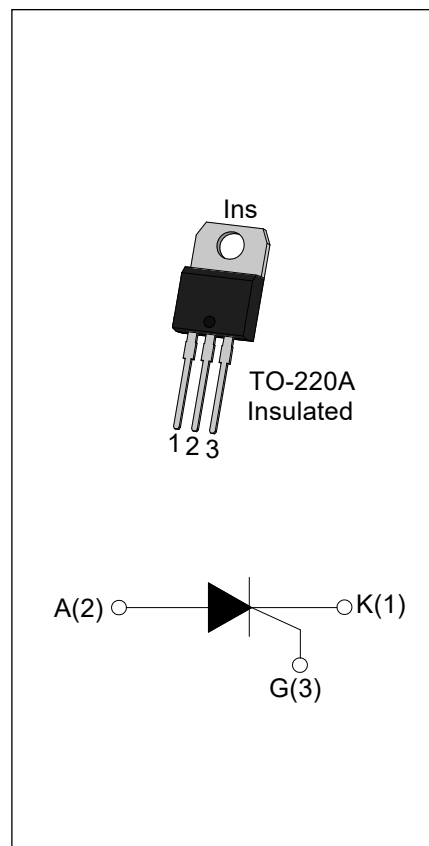




### DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT640A SCRs provide high dv/dt rate with strong resistance to electromagnetic interference. They are especially recommended for use on solid state relay, motorcycle, power charger, T-tools etc. From all three terminals to external heatsink, JCT640A provides a rated insulation voltage of 2500 V<sub>RMS</sub>, complying with UL standards (File ref: E252906). Package TO-220A is RoHS compliant.(2011/65/EU)



### MAIN FEATURES

Symbol	JCT640A
V <sub>DRM</sub> / V <sub>R<sub>RRM</sub></sub>	600V
I <sub>T(RMS)</sub>	40A
I <sub>GT</sub>	≤35mA

### ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	T <sub>stg</sub>	-40-150	°C
Operating junction temperature range	T <sub>j</sub>	-40-125	°C
Repetitive peak off-state voltage(T <sub>j</sub> =25°C)	V <sub>DRM</sub>	600	V
Repetitive peak reverse voltage(T <sub>j</sub> =25°C)	V <sub>R<sub>RRM</sub></sub>	600	V
RMS on-state current	I <sub>T(RMS)</sub>	40	A
TO-220A(Ins) (T <sub>C</sub> =60°C)			
Non repetitive surge peak on-state current (tp=10ms)	I <sub>TSM</sub>	460	A
I <sup>2</sup> t value for fusing (tp=10ms)	I <sup>2</sup> t	1060	A <sup>2</sup> s
Critical rate of rise of on-state current (I <sub>G</sub> =2×I <sub>GT</sub> )	dI/dt	50	A/μs
Peak gate current	I <sub>GM</sub>	4	A

Average gate power dissipation	$P_{G(AV)}$	1	W
Peak gate power	$P_{GM}$	5	W

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

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
$I_{GT}$	$V_D=12V R_L=33\Omega$	-	15	35	mA
$V_{GT}$		-	-	1.5	V
$V_{GD}$	$V_D=V_{DRM} T_j=125^{\circ}C R_L=3.3K\Omega$	0.2	-	-	V
$I_L$	$I_G=1.2I_{GT}$	-	-	90	mA
$I_H$	$I_T=500mA$	-	-	75	mA
dv/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^{\circ}C$	200	-	-	V/ $\mu s$

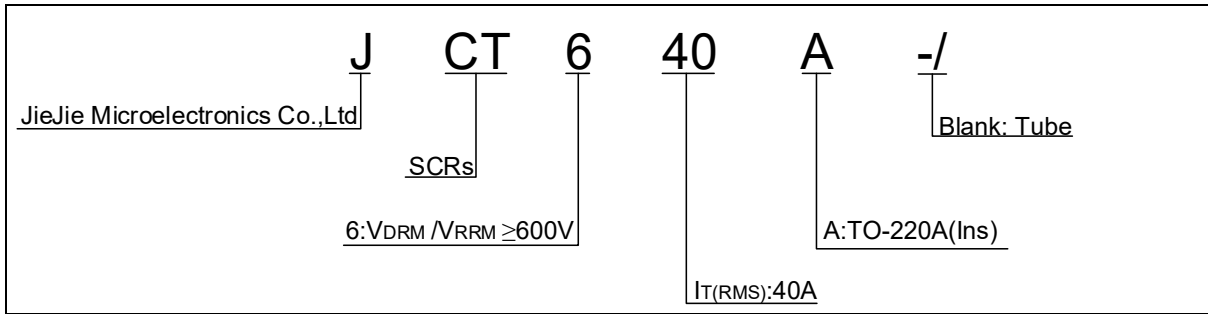
**STATIC CHARACTERISTICS**

Symbol	Parameter		Value(MAX)	Unit
$V_{TM}$	$I_{TM}=80A t_p=380\mu s$	$T_j=25^{\circ}C$	1.55	V
$I_{DRM}$	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25^{\circ}C$	10	$\mu A$
$I_{RRM}$		$T_j=125^{\circ}C$	4	mA

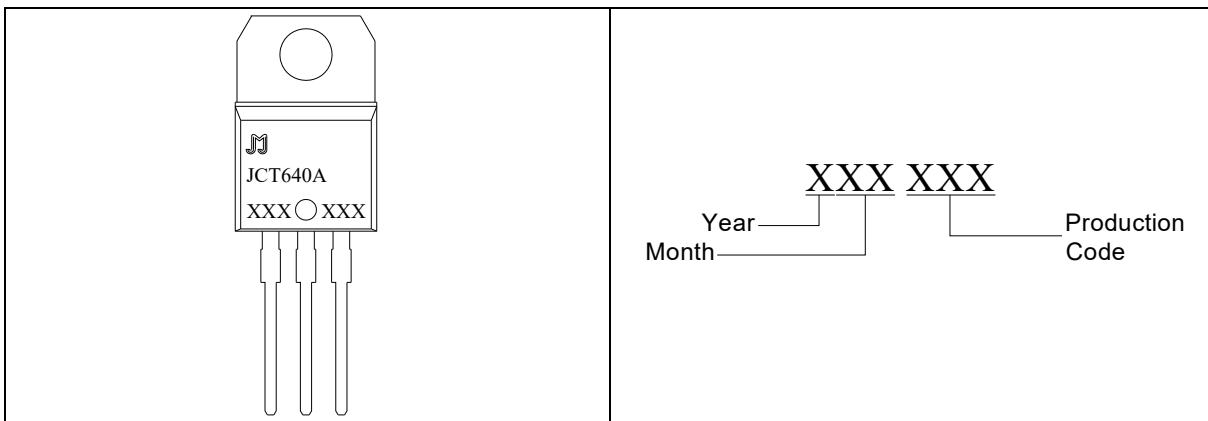
**THERMAL RESISTANCES**

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-220A(Ins)	1.2	$^{\circ}C/W$

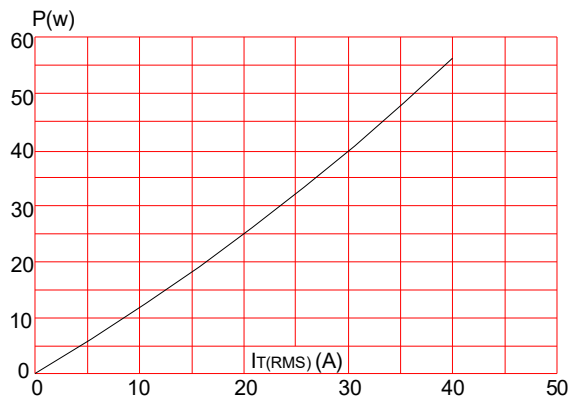
## ORDERING INFORMATION



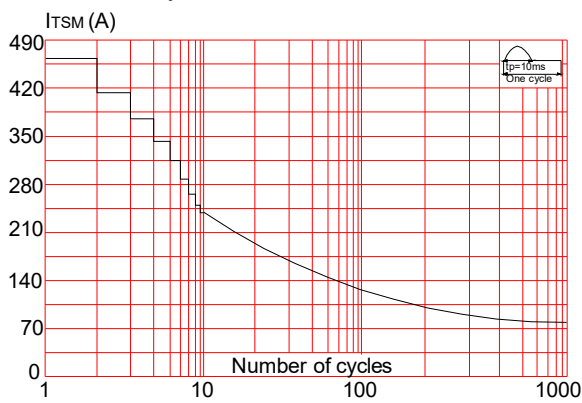
## MARKING



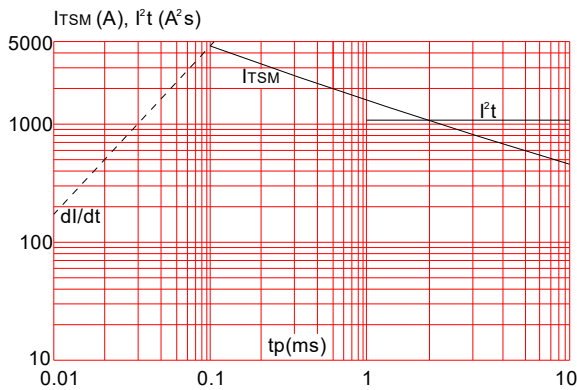
**FIG.1:** Maximum power dissipation versus RMS on-state current



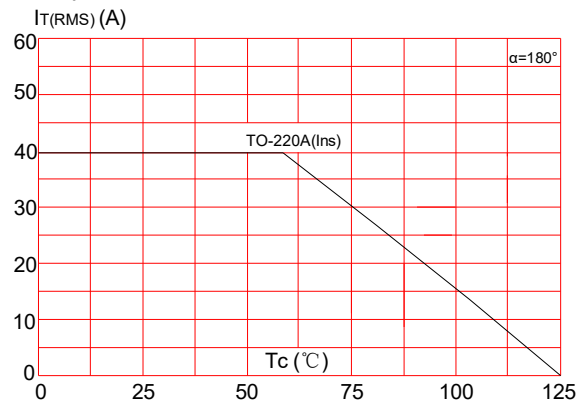
**FIG.3:** Surge peak on-state current versus number of cycles



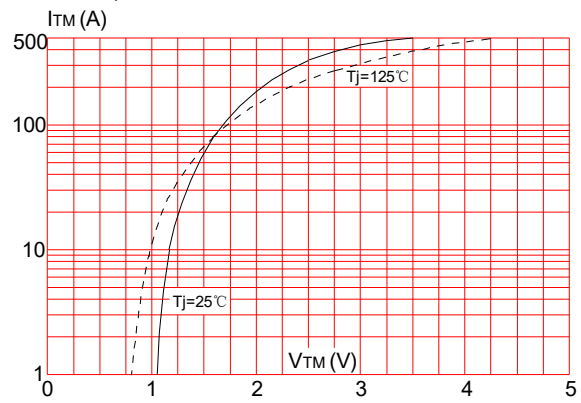
**FIG.5:** Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 10\text{ms}$ , and corresponding value of  $I^2t$  ( $di/dt < 50\text{A}/\mu\text{s}$ )



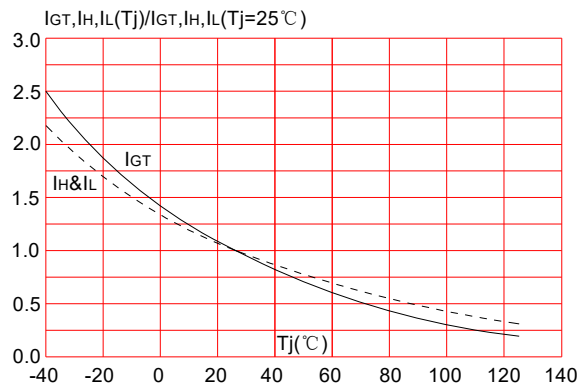
**FIG.2:** RMS on-state current versus case temperature



**FIG.4:** On-state characteristics (maximum values)



**FIG.6:** Relative variations of gate trigger current, holding current and latching current versus junction temperature



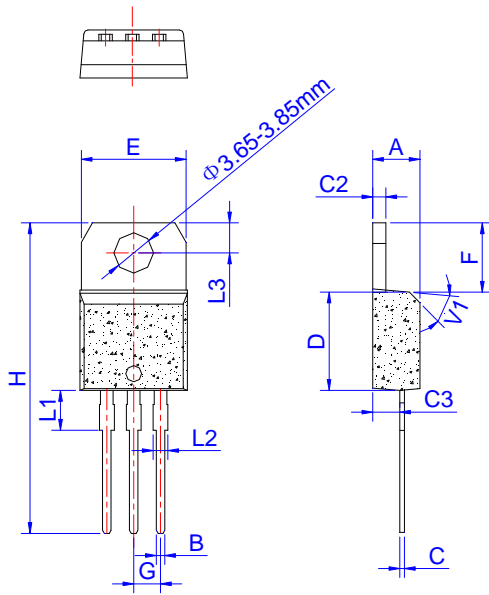
**ORDERING INFORMATION**

Order code	Voltage $V_{DRM}/V_{RRM}$ (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT640A	600	35	TO-220A(Ins)	50	Tube

**Document Revision History**

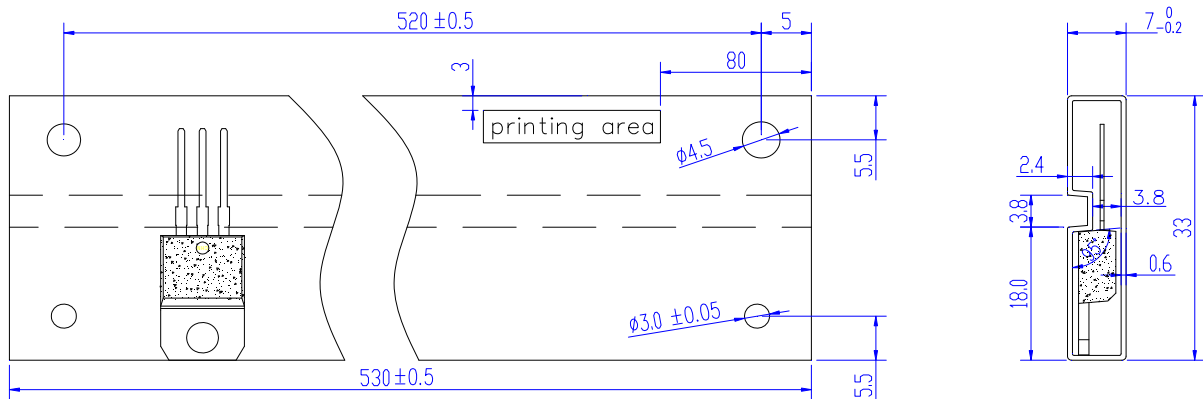
Date	Revision	Changes
Mar 18, 2022	1	Last update

PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.80		10.4	0.386		0.409
F	6.55		6.95	0.258		0.274
G	2.40		2.70	0.094		0.106
H	28.0		29.8	1.102		1.173
L1		3.75			0.148	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
V1		45°			45°	

DELIVERY MODE



PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-220A	TUBE	50	1,000	5,000



Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co.,Ltd assumes no responsibility for the consequences of use without consideration for such information nor use beyond it. Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu JieJie complies with the agreement. Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information. This document supersedes and replaces all information previously supplied.

 is a registered trademark of Jiangsu JieJie Microelectronics Co.,Ltd.

Copyright ©2022 Jiangsu JieJie Microelectronics Co.,Ltd. Printed All rights reserved.

单击下面可查看定价，库存，交付和生命周期等信息

[>>JW\(捷捷微\)](#)