

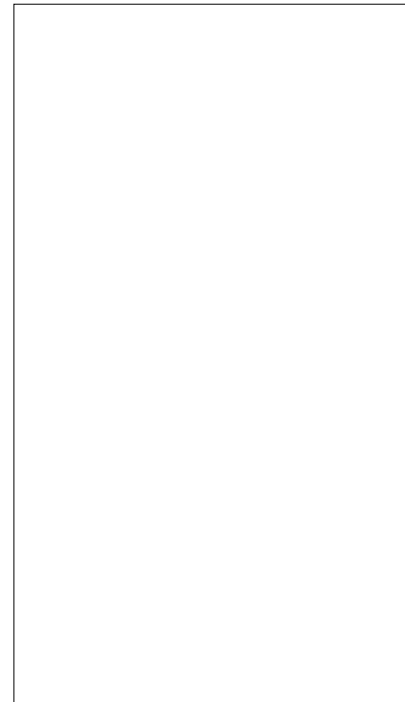


JCT616C 16A SCR

Rev.A.1.1

DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT616C 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-220C is RoHS compliant.



MAIN FEATURES

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 °C)	V _{DRM}	600	V
Repetitive peak reverse voltage (T _j =25 °C)	V _{RRM}	600	V
Average on-state current (T _c 102 °C)	I _{T(AV)}	10	A
RMS on-state current (T _c 102 °C)	I _{T(RMS)}	16	A
Non repetitive surge peak on-state current (t _p =10ms, T _j =25 °C)	I _{TSM}	150	A
Non repetitive surge peak on-state current (t _p =8.3ms, T _j =25 °C)		165	

I²t value fore f7 (e fc 0.006 Tw 12 .2 re .149.5 ()86 (ue (0.00t2.104 0 Td ()T41.72 168.72 Tm8 3

Average gate power dissipation ($T_j=125$)	$P_{G(AV)}$	1	W
Peak gate power	P_{GM}	20	W
Peak pulse voltage ($T_j=25$; non-repetitive,off-state;FIG.7)	V_{pp}	0.5	kV

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

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	$V_D=12V R_L=33$	-	-	15	mA
V_{GT}		-	-	1	V
V_{GD}	$V_D=V_{DRM} T_j=125 R_L=3.3k$	0.2	-	-	V
I_L	$I_G=1.2I_{GT}$	-	-	60	mA
I_H	$I_T=500mA$	-	-	50	mA
dV/dt	$V_D=400V$ Gate Open $T_j=125$	1200	-	-	V/ μs
t_{on}	$I_G=20mA I_A=200mA I_R=20mA$ $T_j=25$	-	4	-	μs
t_{off}		-	60	-	

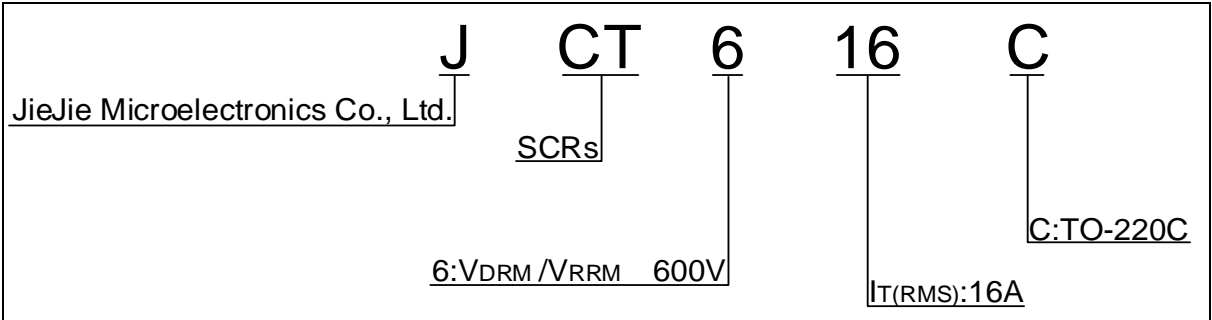
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_{TM}=32A t_p=380\mu s$	$T_j=25$	1.55	V
V_{TO}	Threshold voltage	$T_j=125$	0.77	V
R_D	Dynamic resistance	$T_j=125$	24	m
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25$	5	μA
I_{RRM}		$T_j=125$	0.2	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (DC)	1.1	/W
$R_{th(j-a)}$	junction to ambient (DC)	50	/W

ORDERING INFORMATION



MARKING

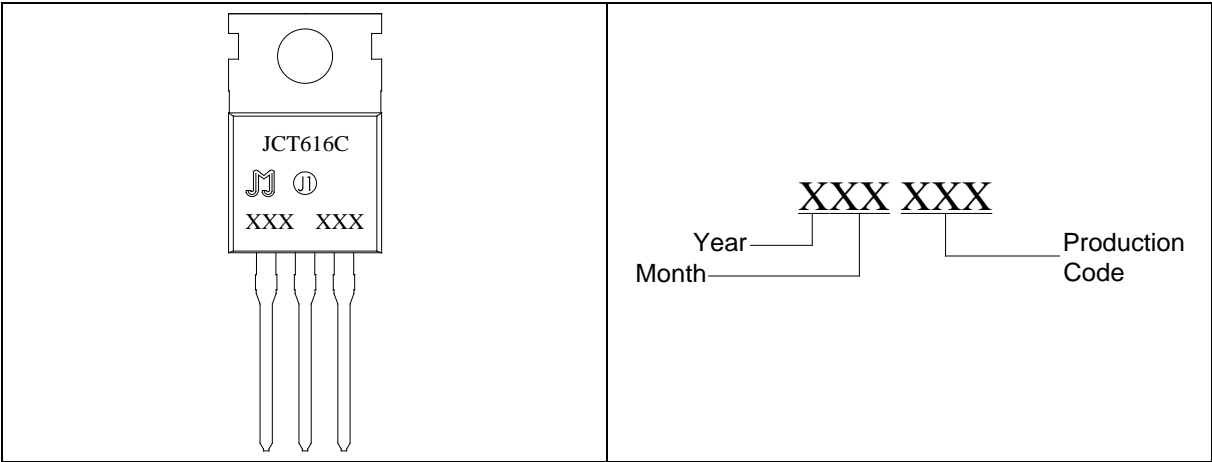
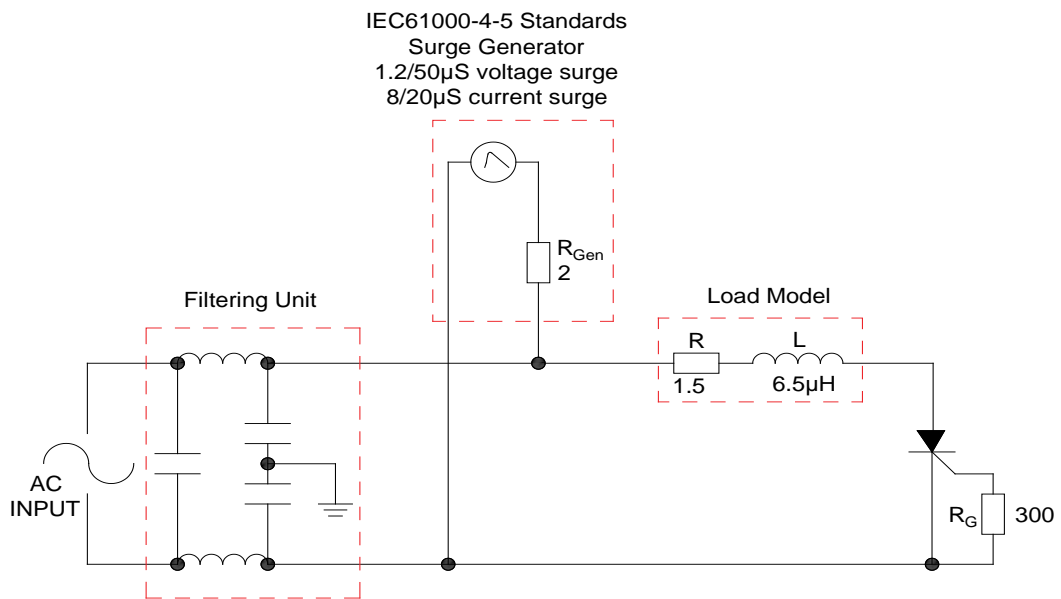


FIG.1: Maximum power dissipation versus RMS on-state current

FIG.2: RMS on-state current -0.015 Tc 0.01 Tw -3.102 87.>J

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



LEAD FORMING AND SOLDERING

Refer to the application note "Assembly Instructions for Thyristors in Through-hole Package" released by JieJie

JCT616C

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 furnished in this document are for reference only. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Jiangsu JieJie Microelectronics Co., Ltd.