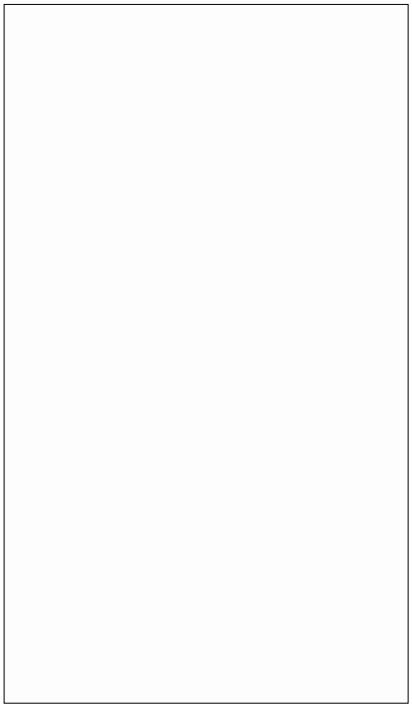
JCT151H-650RH 12A SCR

Rev.A.1.1

With high ability to withstand the shock loading of large current, JCT151H-650RH 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-251 is RoHS compliant.



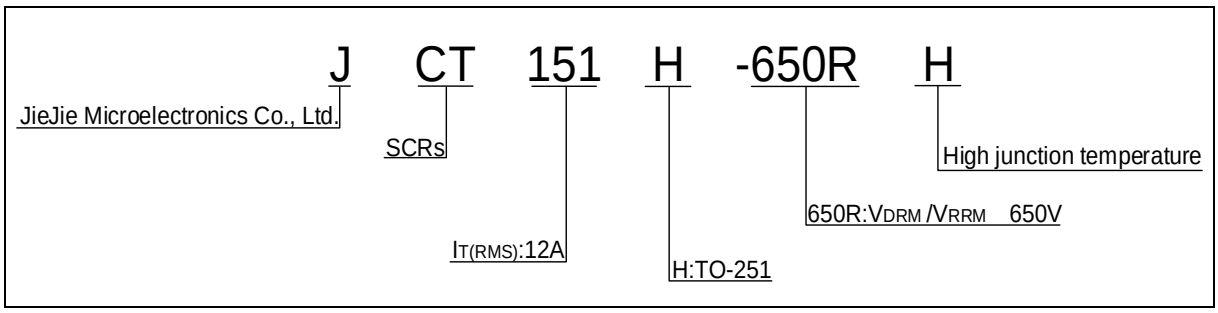
Symbol	Value	Unit
$I_{T(RMS)}$	12	A
V_{DRM}/V_{RRM}	650	V
I_{GT}	≤15	mA

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	
Operating junction temperature range	T_j	-40-150	
Repetitive peak off-state voltage (T_j=25)	V_{DRM}	650	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	650	V
Average on-state current (T_C 74)	$I_{T(AV)}$	7.5	A
RMS on-state current (T_C 74)	$I_{T(RMS)}$	12	A
Non repetitive surge peak on-state current (t_p=10ms, T_j=25)	I_{TSM}	120	A
Non repetitive surge peak on-state current (t_p=8.3ms, T_j=25)		132	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	72	A^2s

Average gate power dissipation (T_j=150)	$P_{G(AV)}$	1	W
Peak gate power	P_{GM}	10	W
Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.7)	V_{pp}	0.7	kV

(T_j=25 unless otherwise specified)

Symbol	Test Condition	Value


J
CT
151
H
-650R
H
JieJie Microelectronics Co., Ltd.
SCRs
IT(RMS):12A
H:TO-251
650R:VDRM /VRRM 650V
High junction temperature

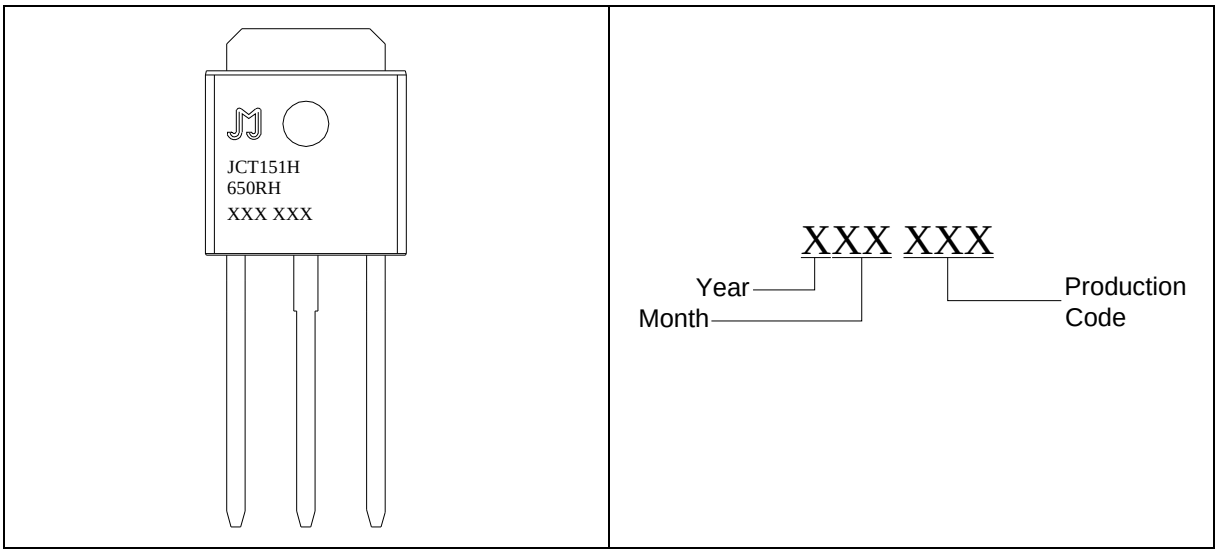

JCT151H
650RH
XXX XXX
XXX XXX
Year
Month
Production
Code

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

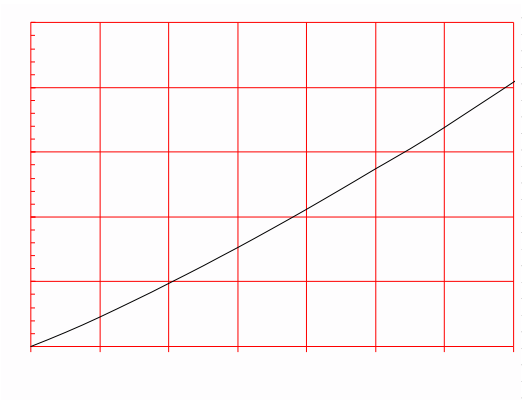


FIG.2: RMS on-state current versus case temperature

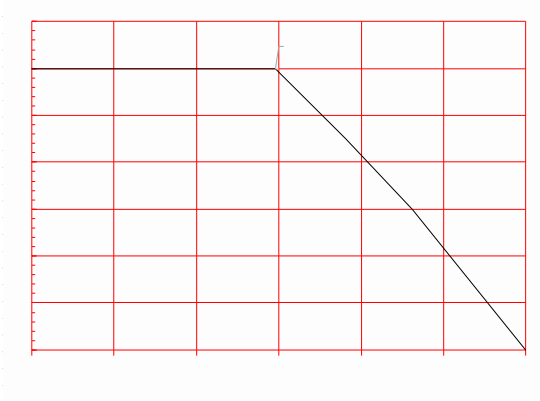
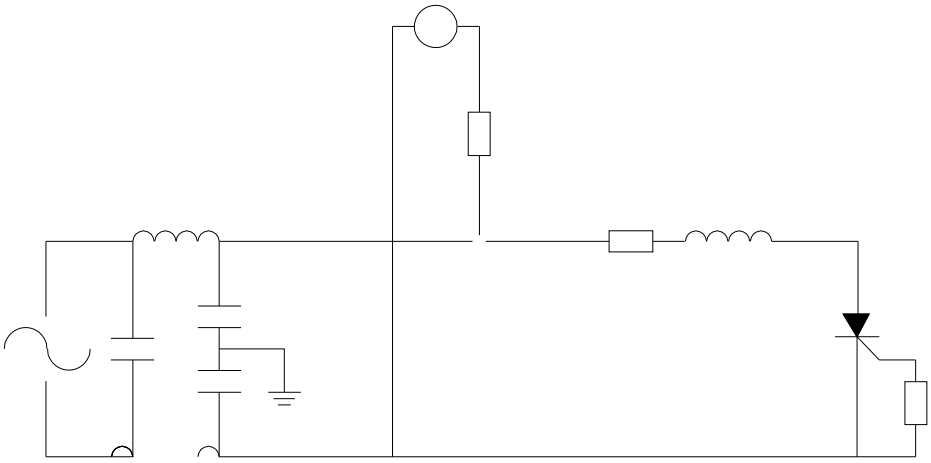


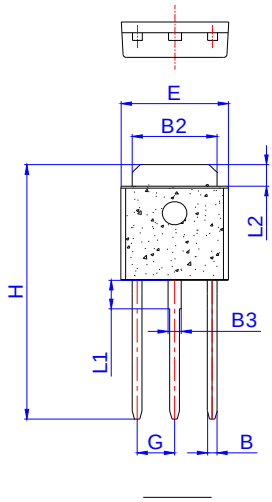
FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.



Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT151H-650RH	650	15	TO-251	80	Tube

Document Revision History

Date	Revision	Changes
Aug.22, 2025	A.1.0	Last update
Oct.17, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA



V11.25

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.095
A2	1.00		1.30	0.039		0.051
B	0.50		0.70	0.020		0.028
B2	5.10		5.40	0.200		0.213
B3						
C						
C2						
D						
E						
G						
L1						

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