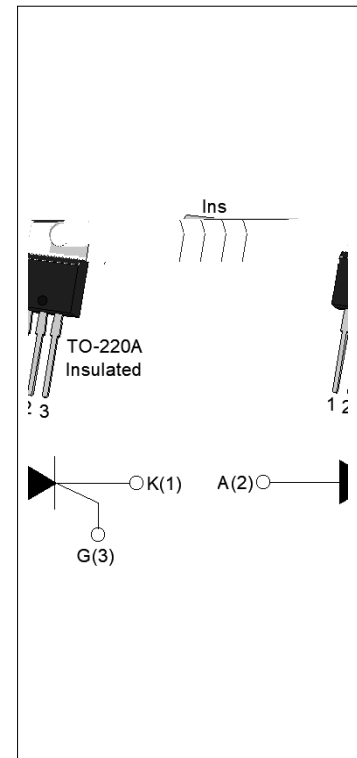


**DESCRIPTION:**

With high ability to withstand the shock loading of large current, JCT820AH 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. From all three terminals to external heatsink, JCT820AH provides a rated insulation voltage of 2500 V_{RMS} , complying with UL standards (File ref: E252906). Package TO-220A is RoHS compliant.

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	20	A
V_{DRM}/V_{RRM}	800	V
I_{GT}	≤ 15	mA

**ABSOLUTE MAXIMUM RATINGS**

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 ($T_j=25^\circ C$)	V_{DRM}	800	V
Repetitive peak reverse voltage ($T_j=25^\circ C$)	V_{RRM}	800	V
Average on-state current ($T_c=123^\circ C$)	$I_{T(AV)}$	13	A
RMS on-state current ($T_c=123^\circ C$)	$I_{T(RMS)}$	20	A
Non repetitive surge peak on-state current ($t_p=10ms, T_j=25^\circ C$)	I_{TSM}	250	A
Non repetitive surge peak on-state current ($t_p=8.3ms, T_j=25^\circ C$)		275	
I^2t value for fusing ($t_p=10ms, T_j=25^\circ C$)	I^2t	312.5	A^2s
Critical rate of rise of on-state current ($I_G=2 I_{GT}, f=100Hz, T_j=150^\circ C$)	di/dt	150	$A/\mu s$
Peak gate current ($t_p=20\mu s, T_j=150^\circ C$)	I_{GM}	5	A

JCT820AH

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Average gate power dissipation ($T_j=150^\circ\text{C}$)	$P_{G(AV)}$	1	W
Peak gate power	P_{GM}	20	W
Peak pulse voltage ($T_j=25^\circ\text{C}$; non-repetitive, off-state; FIG.7)	V_{pp}	0.5	kV

p ELECTRICAL CHARACTERISTICS

ORDERING INFORMATION

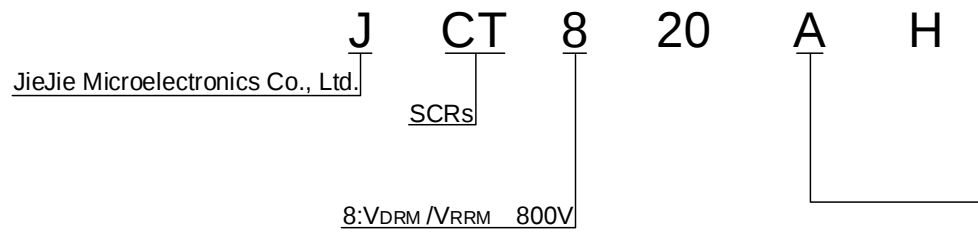
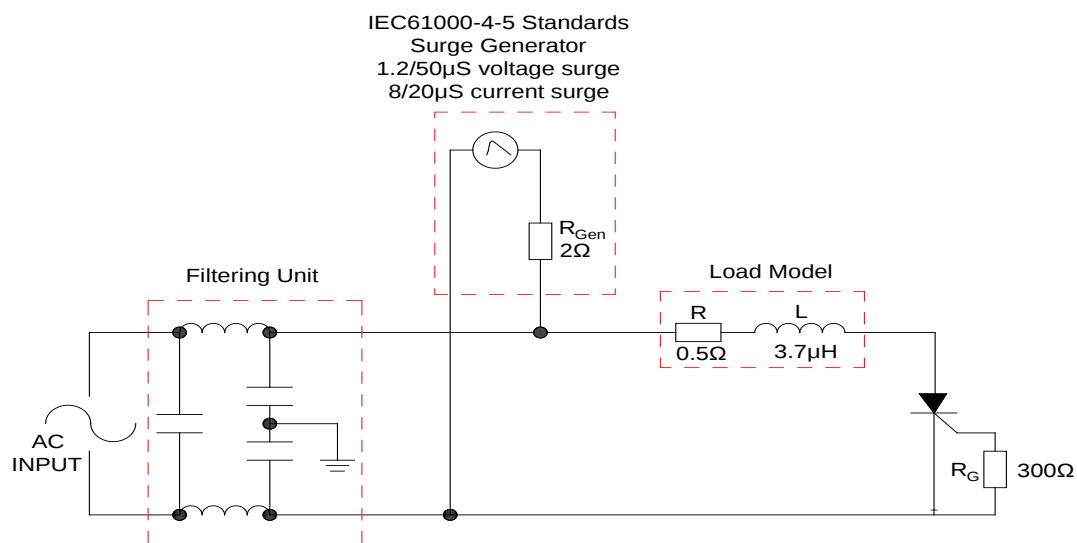


FIG.1: Maximum power dissipation versus
RMS on-state current

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

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



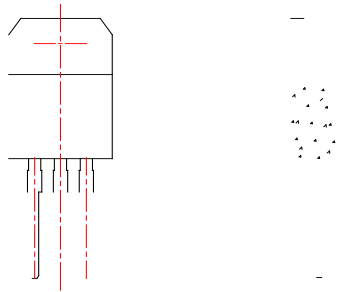
ORDERING INFORMATION

Order code	Voltage $V_{\text{DRM}}/V_{\text{RRM}}$ (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT820AH	800	15	TO-220A(Ins)	50	Tube

Document Revision History

Date	Revision	Changes
Jun.15, 2023	A.1.0	Last update
Oct.11, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA

PACKAGE MECHANICAL DATA



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