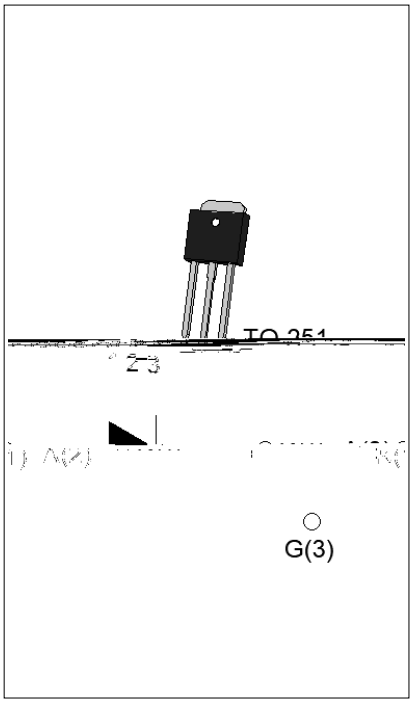
JCT812H 12A SCR

Rev.A.1.1

DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT812H 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.



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	12	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	-40-125	
Repetitive peak off-state voltage (T_j=25)	V_{DRM}	800	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	800	V
Average on-state current (T_C 63)	$I_{T(AV)}$	7.6	A
RMS on-state current (T_C 63)	$I_{T(RMS)}$	12	A
Non repetitive surge peak on-state current (t_p=10ms, T_j=25)	I_{TSM}	140	A
Non repetitive surge peak on-state current (t_p=8.3ms, T_j=25)		154	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	98	A^2s
Critical rate of rise of on-state current (I_G=2 I_{GT}, f=100Hz , T_j=125)	dI/dt	150	A/μs
Peak gate current (t_p=20μs , T_j=125)	I_{GM}	4	A

Average gate power dissipation (T_j=125)	$P_{G(AV)}$	1	W
Peak gate power	P_{GM}	10	W
Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.7)	V_{pp}	0.5	kV

ELECTRICAL CHARACTERISTICS (T_j=25 unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	V_D=12V R_L=33Ω	-	-	15	mA
V_{GT}		-	-	1	V
V_{GD}	V_D=V_{DRM} T_j=125 R_L=3.3kΩ	0.2	-	-	V
I_L	I_G=1.2I_{GT}	-	-	60	mA
I_H	I_T=500mA	-	-	50	mA
dV/dt	V_D=540V Gate Open T_j=125	500	-	-	V/μs
t_{on}	I_G=20mA I_A=200mA I_R=20mA T_j=25	-	5	-	μs
t_{off}		-	80	-	

STATIC CHARACTERISTICS

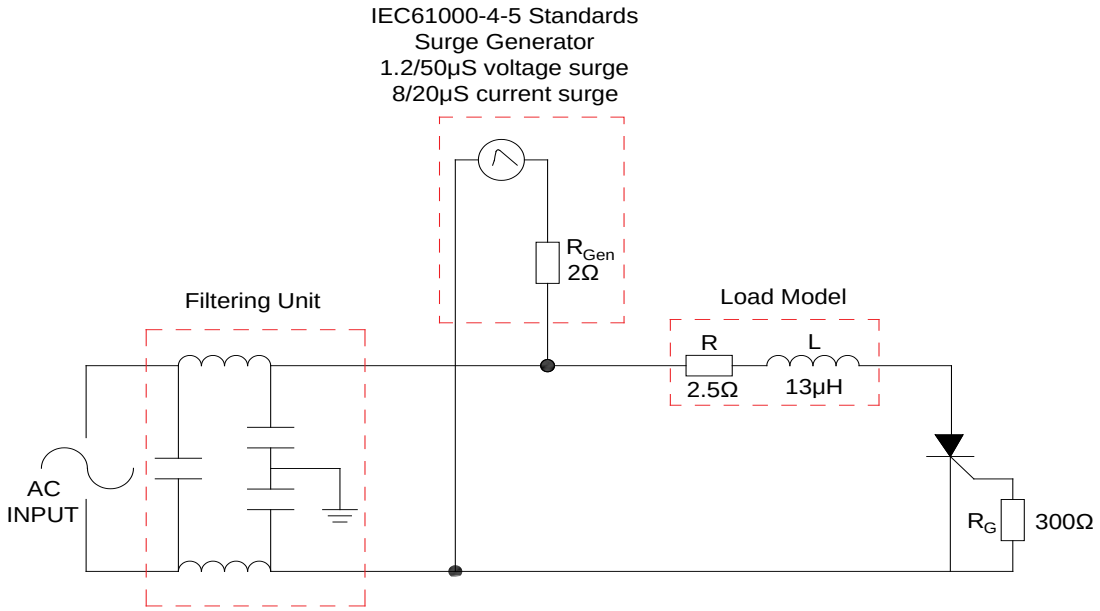
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ORDERING INFORMATION

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.



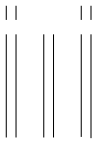
ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT812H	800	15	TO-251	80	Tube

Document Revision History

Date	Revision	Changes
Apr.13, 2023	A.1.0	Last update
Oct.16, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA

PACKAGE MECHANICAL DATA



JCT812H **Jie**