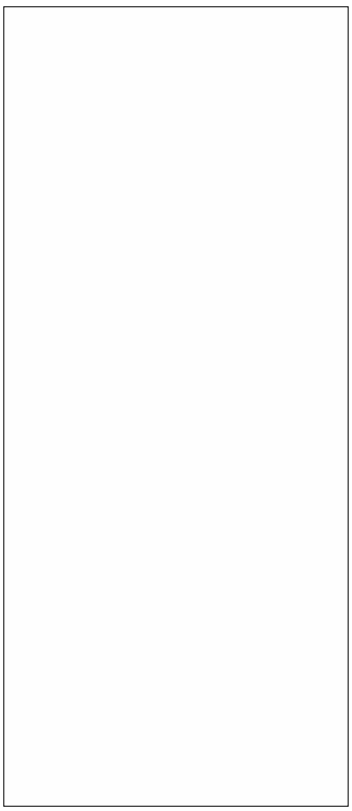
JCT612TF 12A SCR

Rev.A.1.1

JCT612TF silicon controlled rectifier is specifically designed for medium power switching and phase control applications. High current density due to mesa technology; SIPOS and Glass Passivation technology used has reliable operation up to 125 junction temperature. Low I_{GT} parts available. From all three terminals to external heatsink, JCT612TF provides a rated insulation voltage of 2000 $V_{RMS,}$ complying with UL standards (File ref: E252906).
Package T



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

(T_j=25 unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	V_D=12V RjlppM	A			X

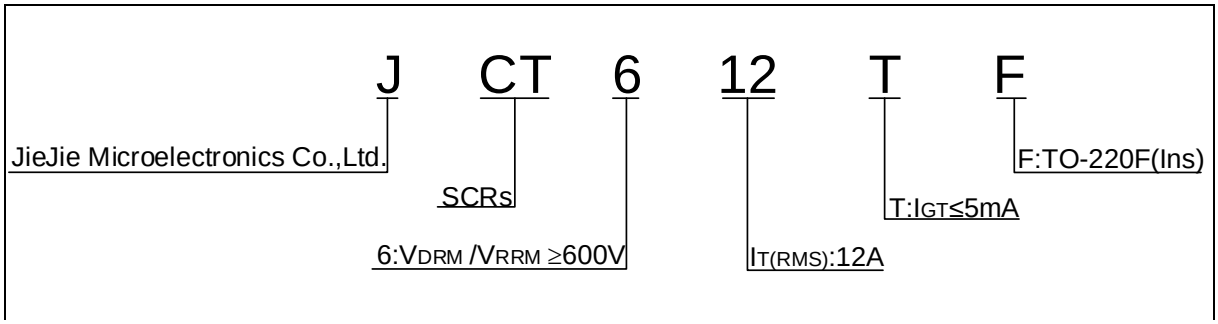

J
CT
6
12
T
F
JieJie Microelectronics Co.,Ltd.
SCRs
6:VDRM /VRRM ≥600V
IT(RMS):12A
T:IGT≤5mA
F:TO-220F(Ins)

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

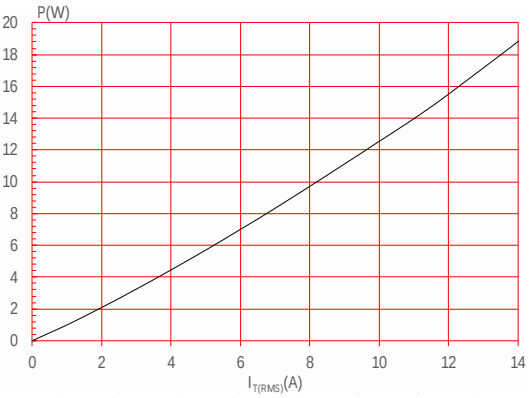
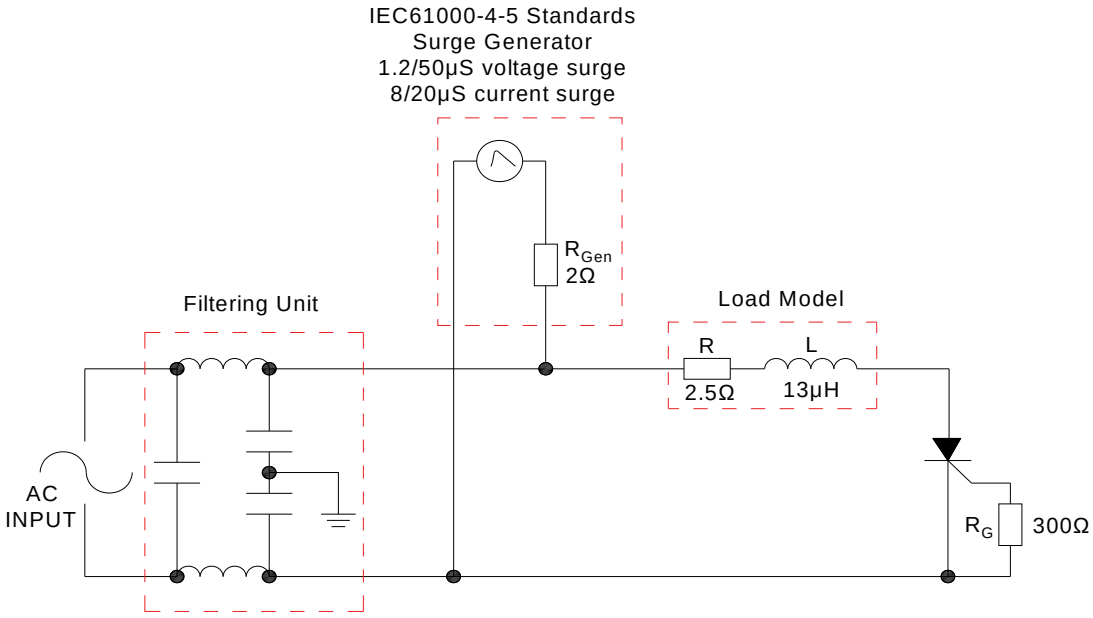


FIG.2: RMS on-state current versus case temperature

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



Refer to the application note “Assembly Instructions for Thyristors in Through-hole Package” released by JieJie Microelectronics.

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT612TF	600	5	TO-220F(Ins)	50	Tube

Document Revision History

Date	Revision	Changes
Apr.13, 2023	A.1.0	Last update
Sept.29, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA



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