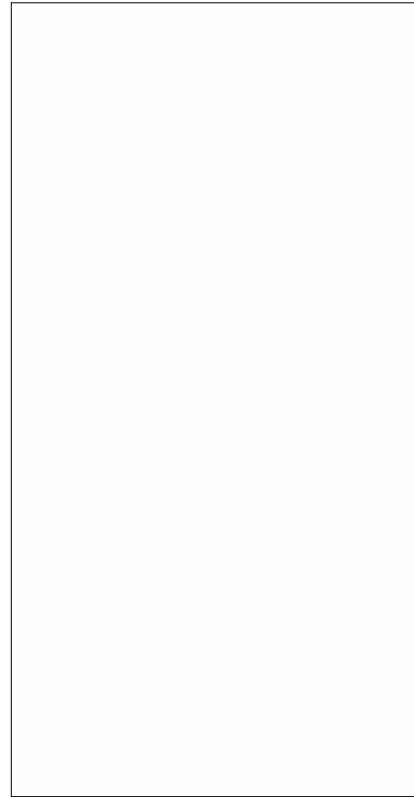




With high ability to withstand the shock loading of large current, JCT840FH SCR provides high dV/dt rate with strong resistance to electromagnetic interference. It is especially recommended for use on solid state relay, motorcycle, power charger, T-tools etc. From all three terminals to external heatsink, JCT840FH provides a rated insulation voltage of 2000 V_{RMS}, complying with UL standards (File ref: E252906). Package TO-220F is RoHS compliant.



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 °C)	V _{DRM}	800	V
Repetitive peak reverse voltage (T _j =25 °C)	V _{RRM}	800	V
Average on-state current (T _c =130 °C)	I _{AV}	25	A

Peak gate current ($t_p=20\mu s$, $T_j=150$)	I_{GM}	10	A
Average gate power dissipation ($T_j=150$)	$P_{G(AV)}$	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

($T_j=25$ unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	$V_D=12V$ $R_L=33$	-	-	35	mA
V_{GT}		-	-	1	V
V_{GD}	$V_D=V_{DRM}$ $T_j=150$ $R_L=3.3k$	0.2	-	-	V
I_L	$I_G=1.2I_{GT}$	-	-	80	mA
I_H	$I_T=500mA$	-	-	70	mA
dV/dt	$V_D=540V$ Gate Open $T_j=125$	1 00	-	-	V/ μs
	$V_D=540V$ Gate Open $T_j=150$	500	-	-	
t_{on}	$I_G=40mA$ $I_A=400mA$ $I_R=40mA$ $T_j=25$	-	2	-	μs
t_{off}		-	60	-	

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_{TM}=80A$ $t_p=380\mu s$	$T_j=25$	1.55	V
V_{TO}	Threshold voltage	$T_j=150$	0.65	V
R_D	Dynamic resistance	$T_j=150$	17	m

I_{DRM} e'

D

R ee

M

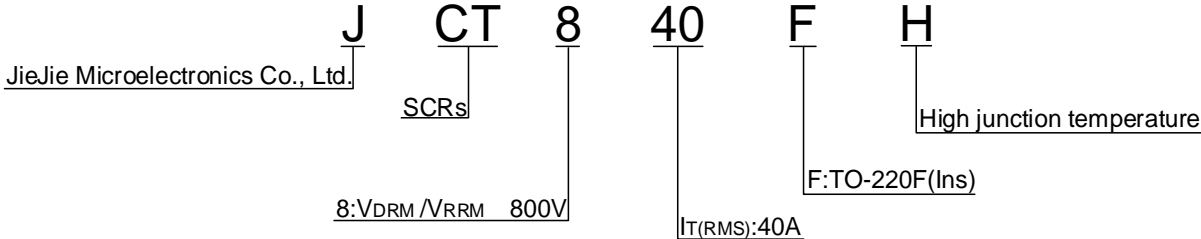


FIG.1: Maximum power dissipation versus RMS on-state current

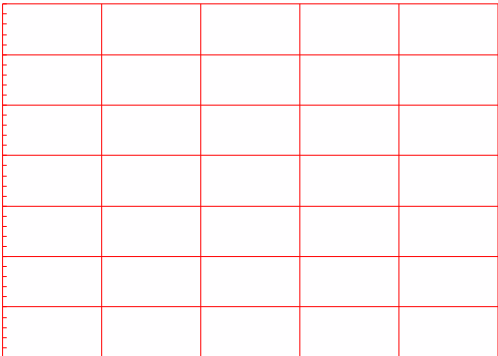
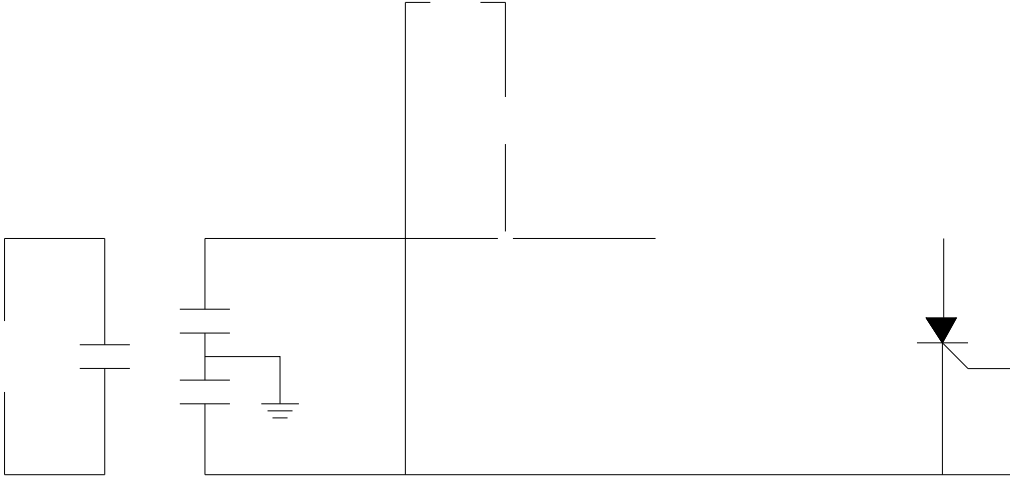


FIG.2: RMS on-state current versus case temperature

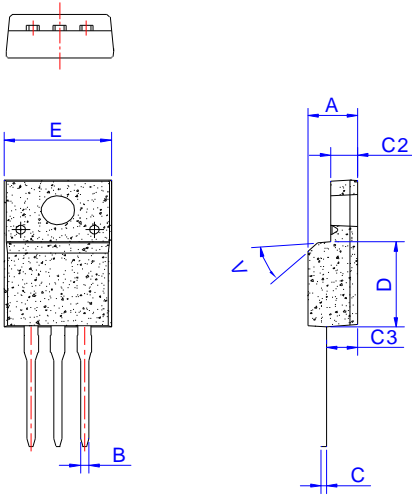
FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.



Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JCT840FH	800	35	TO-220F(Ins)	50	Tube

Document Revision History

Date	Revision	Changes
Jun.15, 2023	A.1.0	Last update
Oct.16, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA



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 provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third