

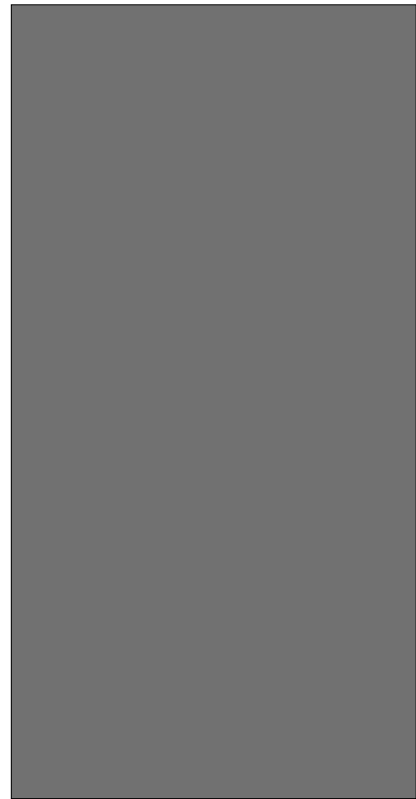


JCT840FH 40A SCR

Rev.A.1.1

DESCRIPTION:

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.



MAIN FEATURES

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 ($T_c = 13^\circ C$)	$I_{T(AV)}$	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

ELECTRICAL CHARACTERISTICS ($T_j=25$ 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	-	

STATIC CHARACTERISTICS

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_{DRMe} e'

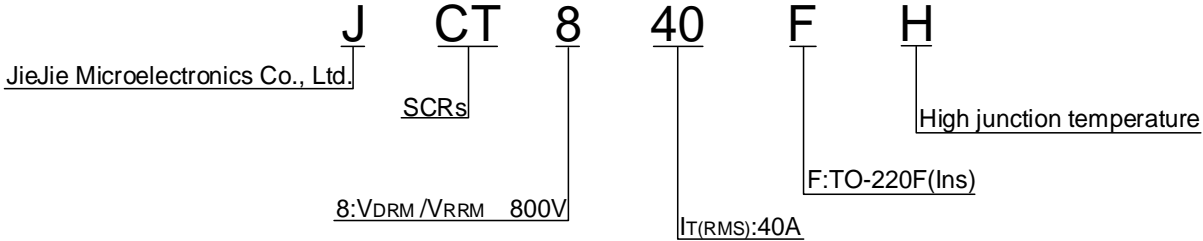
D

R ee

M



ORDERING INFORMATION



JCT840FH

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

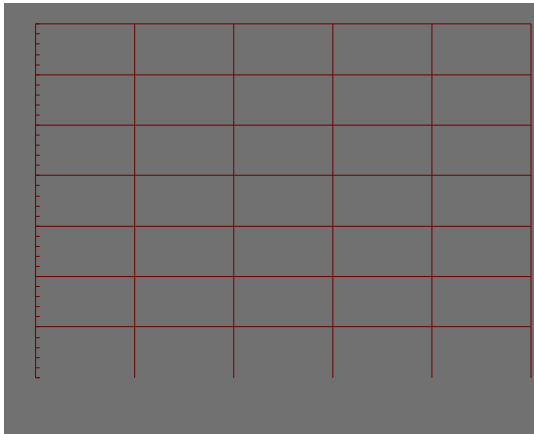
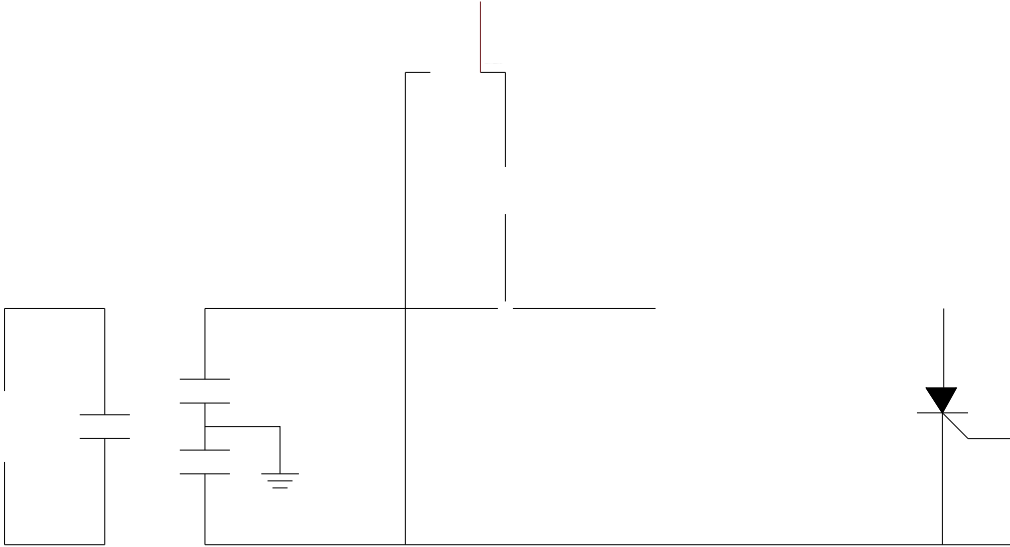


FIG.2: RMS on-state current versus case temperature

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



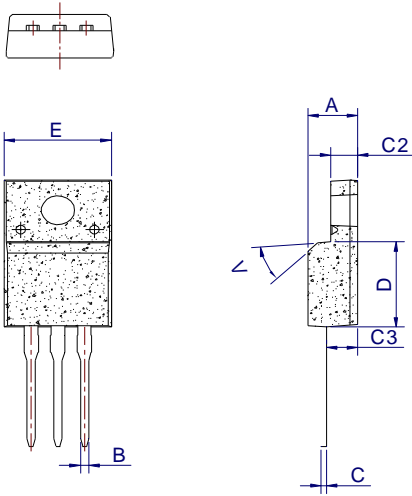
**ORDERING INFORMATION**

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
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

PACKAGE MECHANICAL DATA





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