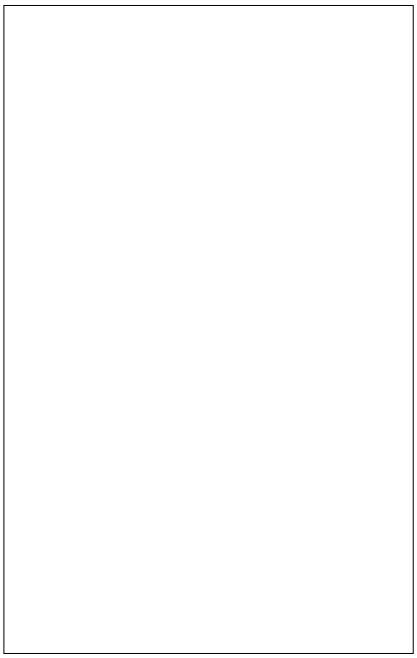
JCT840EH 40A SCR

Rev.A.1.1

With high ability to withstand the shock loading of large current, JCT840EH 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. Package TO-263 is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	40	A
V_{DRM}/V_{RRM}	800	V
I_{GT}	≤35	mA

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)	V_{DRM}	800	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	800	V
Average on-state current ($T_C \leq$ 129)	$I_{T(AV)}$	40	A

Peak gate power	P_{GM}	20	W
Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.8)	V_{pp}	0.5	kV

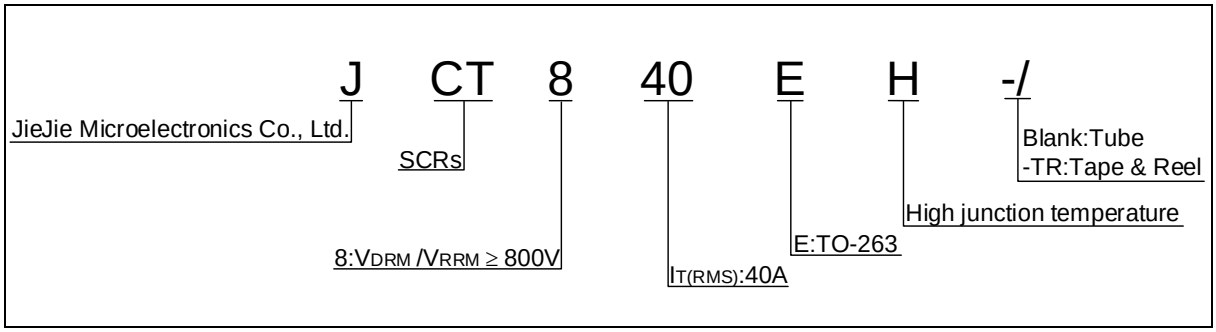
(T_j=25 unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	V_D=12V R_L=33Ω	-	-	35	mA
V_{GT}		-	-	1	V
V_{GD}	V_D=V_{DRM} T_j=150 R_L=3.3kΩ	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=380μs	T_j=25	1.55	V
V_{TO}	Threshold voltage	T_j=150	0.65	V
R_D	Dynamic resistance	T_j=150	17	mΩ
I_{DRM}	V_D=V_{DRM} V_R=V_{RRM}	T_j=25	5	μA
I_{RRM}		T_j=150	10	mA

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (DC)	0.4	/W

$R_{th(j-a)}$ junction to ambient (D e abi


J
CT
8
40
E
H
-/
JieJie Microelectronics Co., Ltd.
SCRs
8:VDRM /VRRM ≥ 800V
IT(RMS):40A
E:TO-263
High junction temperature
Blank:Tube
-TR:Tape & Reel

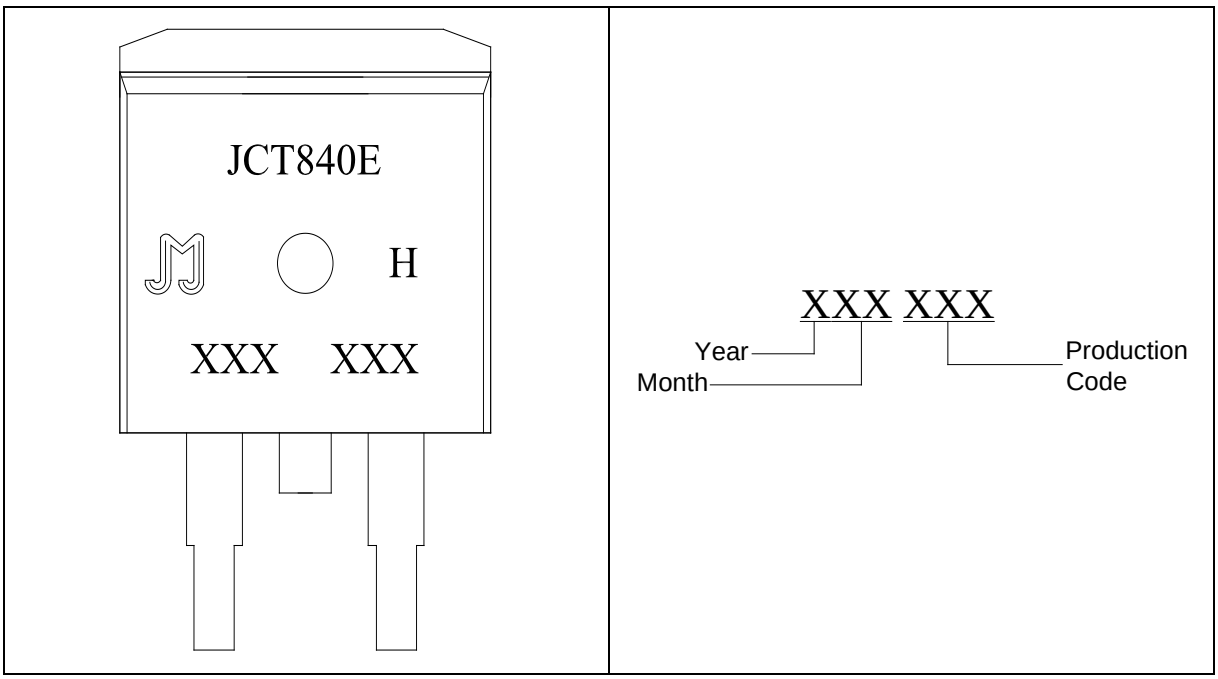

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FIG.1: Maximum power dissipation versus RMS on-state current

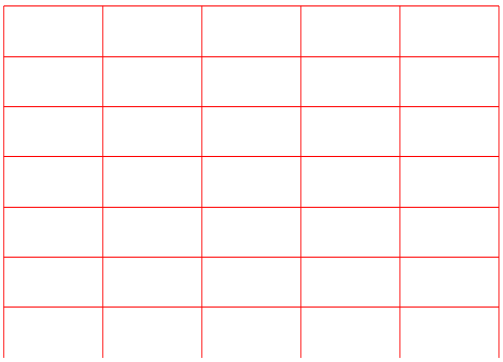


FIG.2: RMS on-state current versus case temperature

FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature

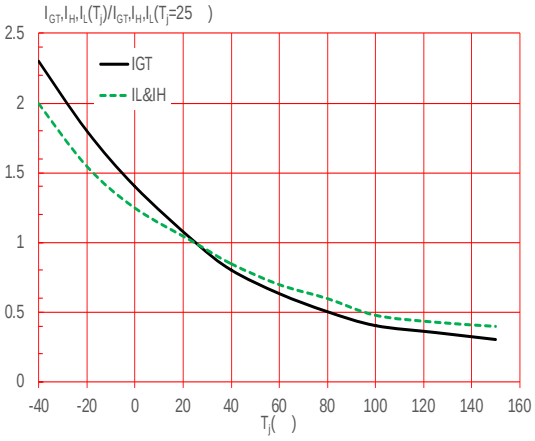
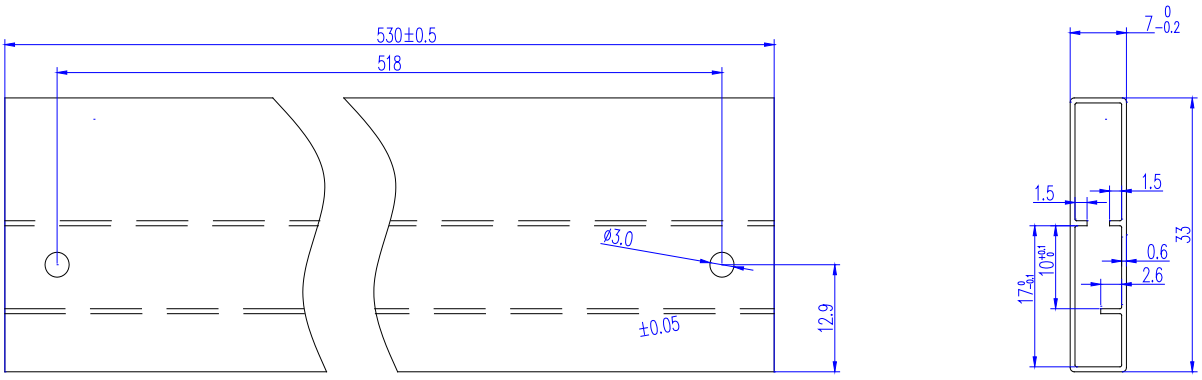


FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards. 5113

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A						
B						
C						


530±0.5
518
Ø3.0
±0.05
12.9
7 0 -0.2
1.5
1.5
0.6
2.6
33
17 0 -0.1
10 +0.1 0

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