



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 ($T_j=25^\circ\text{C}$)	V_{DRM}	800	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	800	V
Average on-state current ($T_c \leq 125^\circ\text{C}$)	$I_{T(AV)}$	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}	$V_D=12V$ $R_L=33\Omega$	-	-	35	mA
V_{GT}		-	-	1	V
V_{GD}	$V_D=V_{DRM}$ $T_j=150$ $R_L=3.3k\Omega$	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 Ω
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		

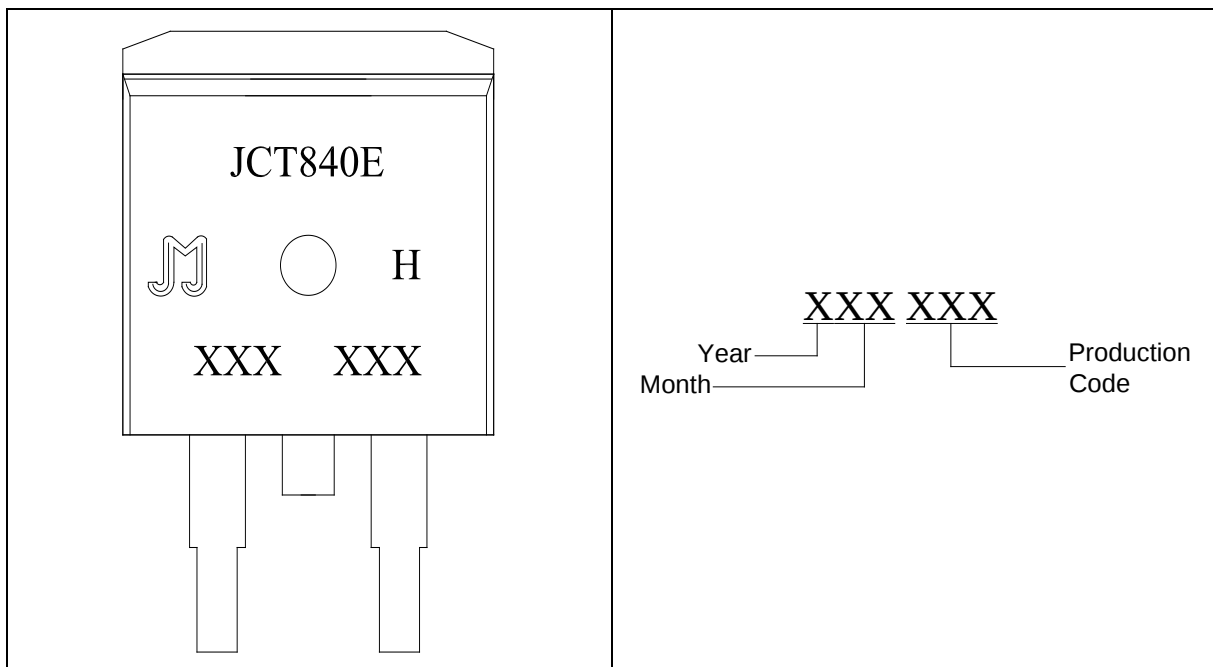
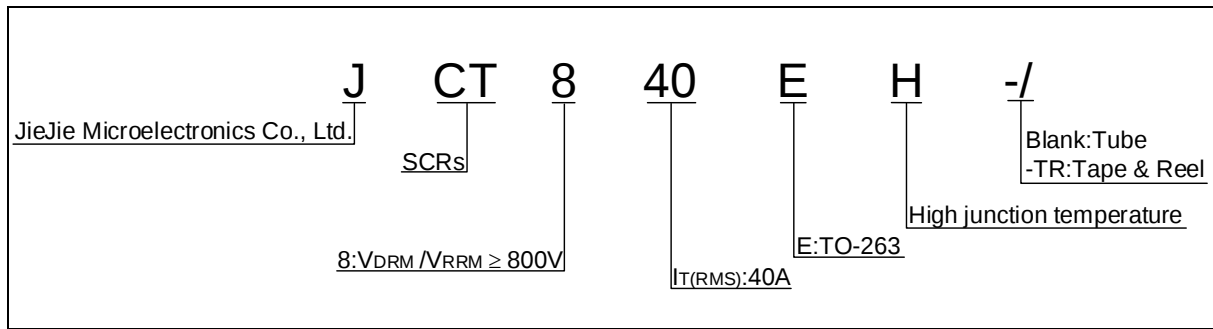


FIG.1: Maximum power dissipation versus
RMS on-state current

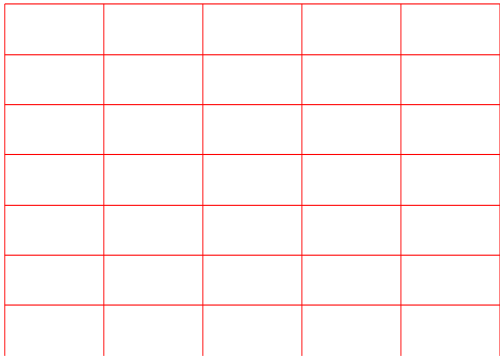
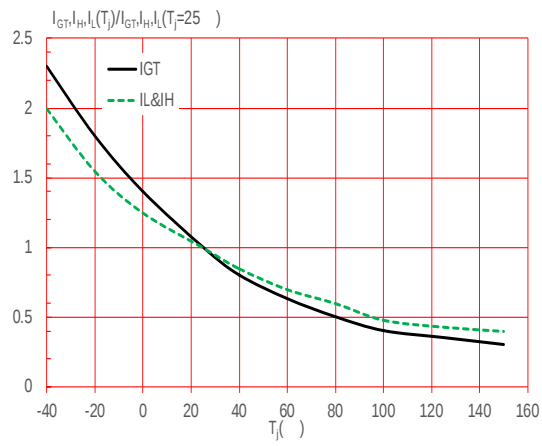


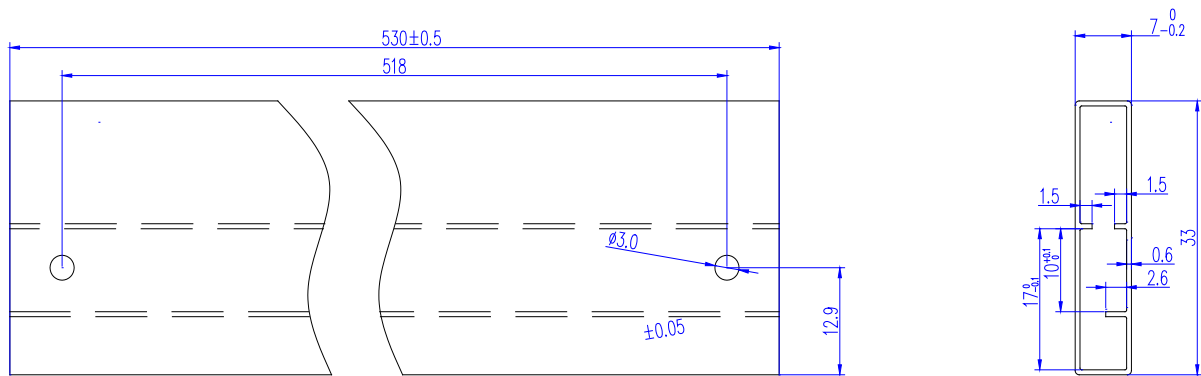
FIG.2: RMS on-state current versus case
temperature

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





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



Information in MC aThgdoc004 u>BDC enMC aT gbelev/BBMC aTo be ac004 c004 ure and r w (