(Tc = 25°C unless otherwise specified)

$V_{DS,max}$	Drain source voltage	1200	V	V_{GS} = 0V, I_D = 100μA	
$V_{GS,max}$	Gate source voltage	-8 /+22	V	Absolute maximum values	Note1
$V_{GSpulse}$	Gate-source voltage,max. transient voltage	-10 /+25	V	$t_p \leq 0.5\mu s$, D 0.01	
V_{GSop}	Gate source voltage	-4 /+18	V	Recommended operational values	
I_D	Continuous drain current	65 46	A	V_{GS} = 18V, T_C = 25˚C V_{GS} = 18V, T_C = 100˚C	Fig.19
$I_{D(pulse)}$	Pulsed drain current	185	A	Pulse width t_P =100μs limited by $T_{J,max}$	Fig.22
P_D	Power dissipation	268	W	T_C = 25˚C,T_J = 175˚C	Fig.20
T_J ,T_{stg}	Operating Junction and storage temperature	-55 to +175	˚C		
T_L	Soldering temperature	260	˚C	1.6mm (0.063”) u	

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Q_{gs}	Gate source charge	-	22	-	nC	V_{DS} = 800V, V_{GS} = -4/+18V I_D = 32A	Fig.12
Q_{gd}	Gate drain charge	-	18	-			
Q_g	Gate charge	-	60	-			

(Tc = 25°C unless otherwise specified)

E_{on}	Turn on switching energy	-	236	-	μJ	V_{DS} = 800V, V_{GS} = -4/+18V I_D = 32A, Rg = 2.5Ω L = 120μH	Fig.26
E_{off}	Turn off switching energy	-	52	-			
$t_{d\ on}$	Turn on delay time	-	14	-	ns		Fig.27
t_r	Rise time	-	12	-			
$t_{d\ off}$	Turn off delay time	-	23	-			
t_f	Fall time	-	8	-			

Figure 1. Output characteristics T_J = -55 ºC

Figure 2. Output characteristics T_J = 25 ºC

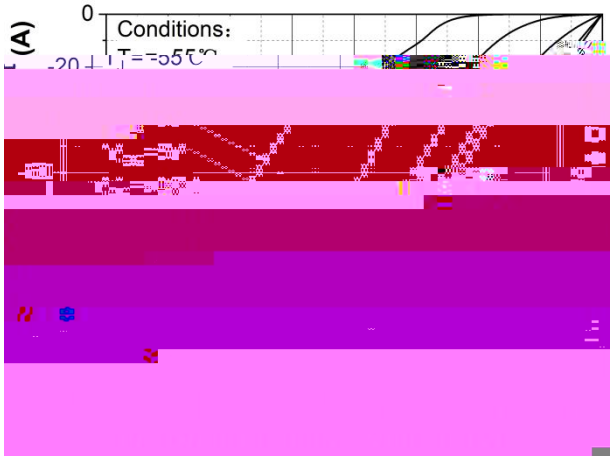


Figure 13. 3rd quadrant characteristic at T_J = -55 ºC

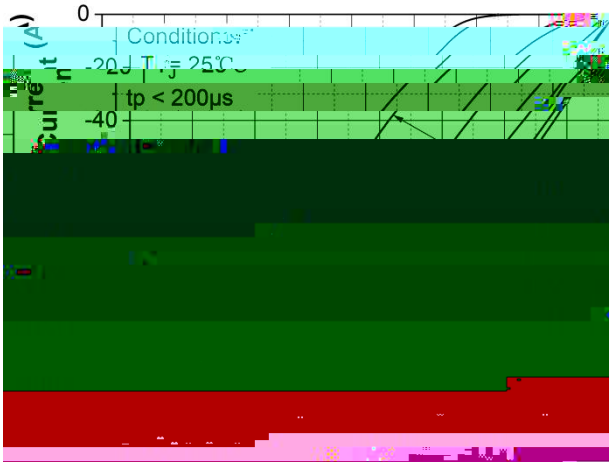


Figure 14. 3rd quadrant characteristic at T_J = 25 ºC

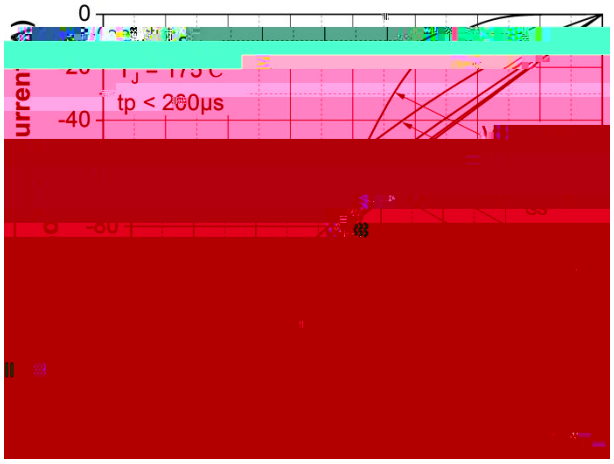


Figure 15. 3rd quadrant characteristic at T_J = 175 ºC

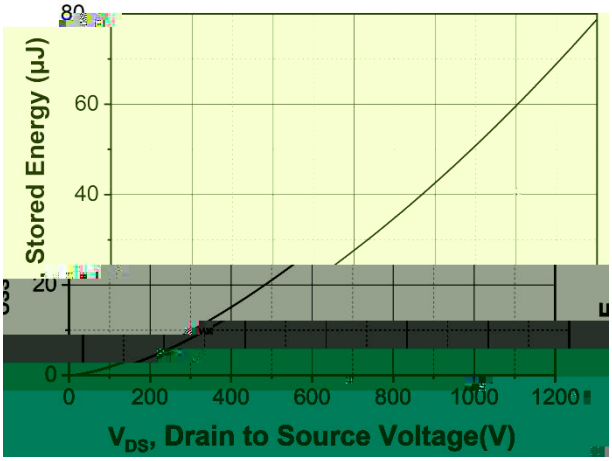


Figure 16. Output capacitor stored energy

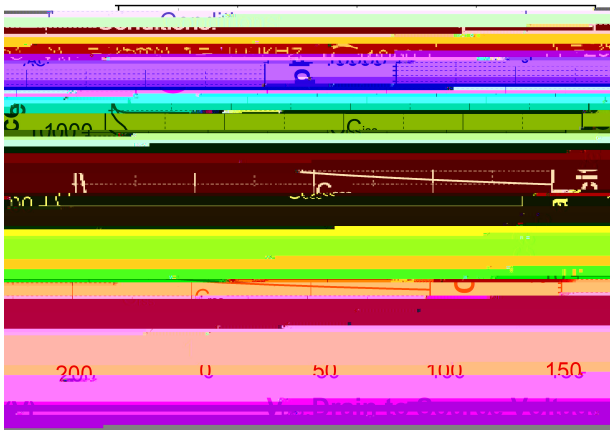


Figure 17. Capacitances vs. drain-source voltage (0 - 200V)

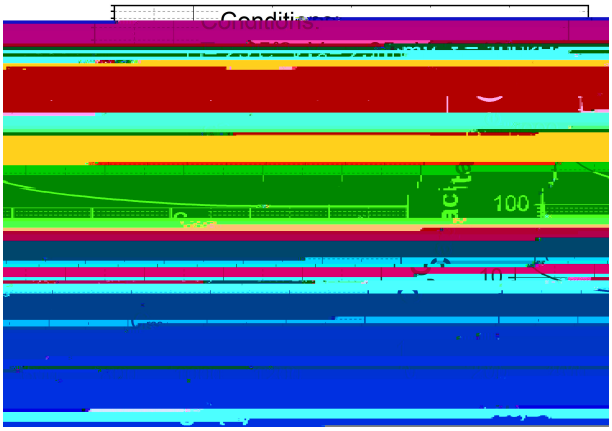


Figure 18. Capacitances vs. drain-source voltage (0 - 1200V)

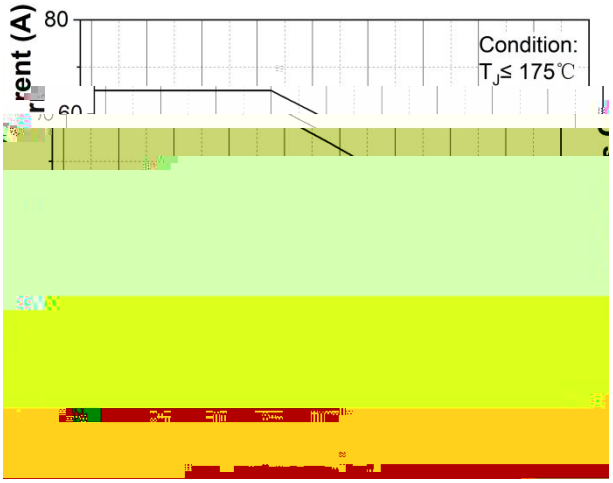


Figure 19. Continuous drain current derating vs. case temperature

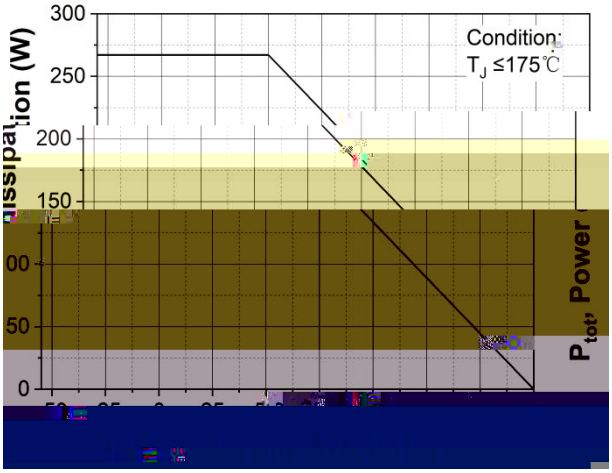


Figure 20. Maximum power dissipation derating vs. case temperature

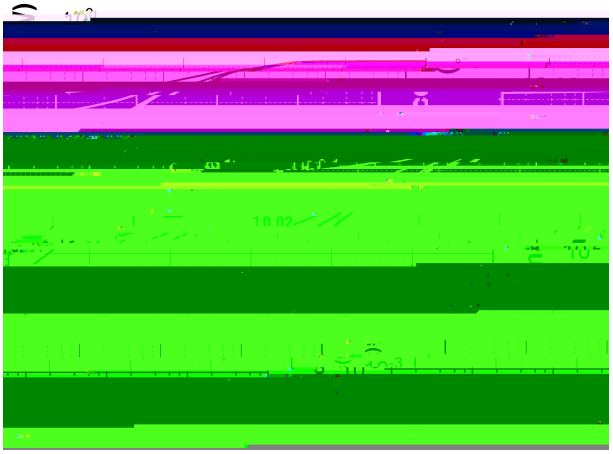


Figure 21. Transient thermal impedance (junction - case)

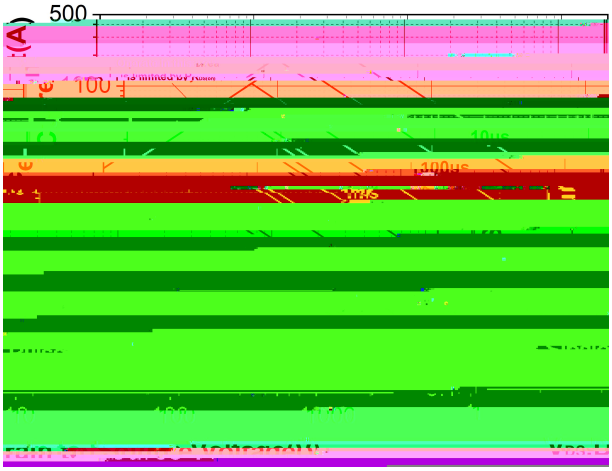


Figure 22. Safe operating area



Figure 23. Clamped Inductive switching energy vs. drain current (V_{DD} = 600V)

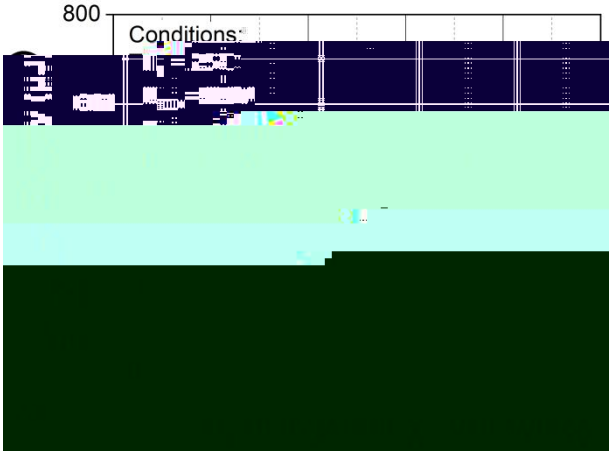
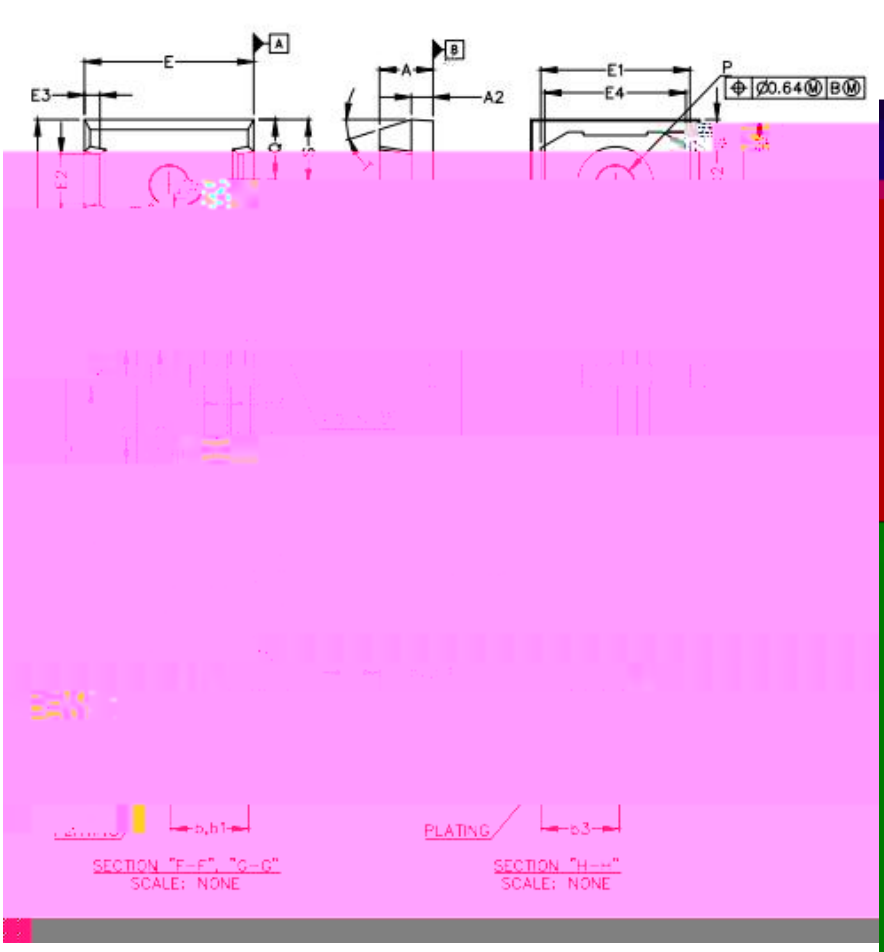
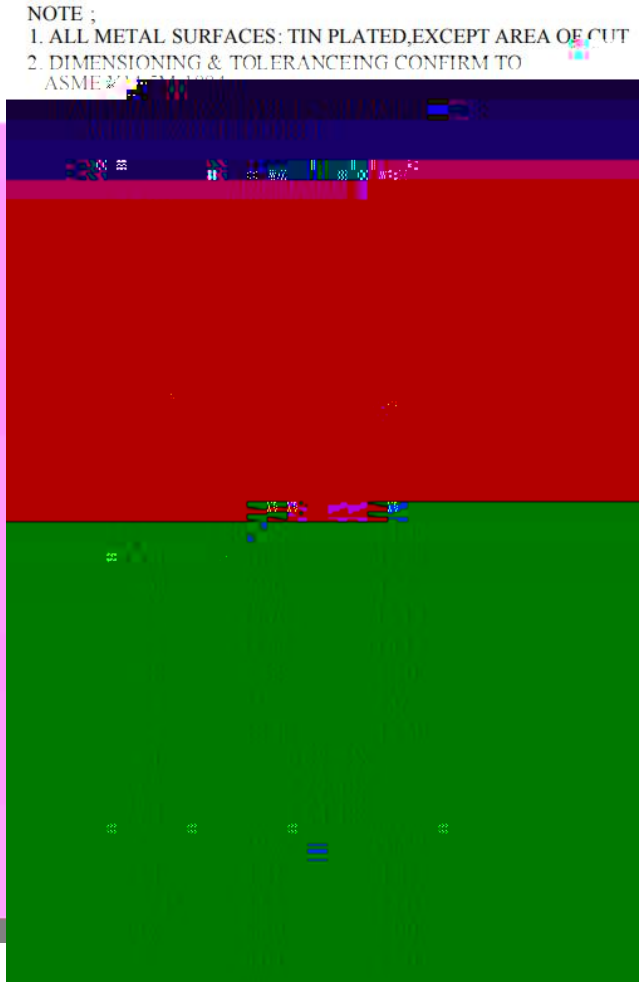


Figure 24. Clamped inductive switching energy vs. drain current (V_{DD} = 800V)

Figure 25. Clamped inductive switching energy vs. R_G(ext)

(TO-247-4L-C)


E
E3
A
B
A
A2
E1
E4
P
Ø0.64Ⓜ BⓂ
b,b1
PLATING
b3
SECTION "F-F", "G-G"
SCALE: NONE
SECTION "H-H"
SCALE: NONE


NOTE ;
1. ALL METAL SURFACES: TIN PLATED,EXCEPT AREA OF CUT
2. DIMENSIONING & TOLERANCEING CONFIRM TO

Datasheet

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7. Except as otherwise explicitly approved by Sichain in a written document signed by authorized representatives of Sichain, Sichain' products may not be used in any applications where a failure of the product or any consequences of the use thereof can reasonably be expected to result in personal injury.

8. For use of our products in applications requiring a high degree of reliability (as exemplified below), please contact and consult with a Sichain representatives, for example but not limited to: transportation equipment,primary communication equipment,traffic lights,fire/crime prevention, safety equipment, medical systems, and power transmission systems.