



NVHL070N120M3S

Table 1. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Junction to Case Steady State (Note 1)	R_{JC}	0.94	°C/W
Junction to Ambient Steady State (Note 1)	R_{JA}	40	

Table 2. ELECTRICAL CHARACTERISTICS ($T_J = 25^\circ\text{C}$ unless otherwise specified)

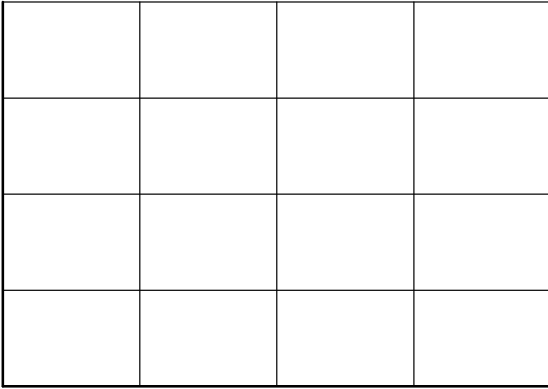
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
OFF STATE CHARACTERISTICS						
Drain to Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0\text{ V}, I_D = 1\text{ mA}$	1200	–	–	V
Drain to Source Breakdown Voltage Temperature Coefficient	$V_{(BR)DSS}/T_J$	$I_D = 1\text{ mA}$, referenced to 25°C (Note 6)	–	0.3	–	V/°C
Zero Gate Voltage Drain Current	I_{DSS}	$V_{GS} = 0\text{ V}, V_{DS} = 1200\text{ V}, T_J = 25^\circ\text{C}$	–	–	100	A
Gate to Source Leakage Current	I_{GSS}	$V_{GS} = +22/ \pm 10\text{ V}, V_{DS} = 0\text{ V}$	–	–	± 1	A
ON STATE CHARACTERISTICS (Note 2)						
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{GS} = V_{DS}, I_D = 7\text{ mA}$	2.04	2.9	4.4	V
Recommended Gate Voltage	V_{GOP}		3	–	+18	V
Drain to Source On Resistance	$R_{DS(on)}$	$V_{GS} = 18\text{ V}, I_D = 15\text{ A}, T_J = 25^\circ\text{C}$	–	65	87	m
		$V_{GS} = 18\text{ V}, I_D = 15\text{ A}, T_J = 175^\circ\text{C}$ (Note 6)	–	136	–	
Forward Transconductance	g_{FS}	$V_{DS} = 10\text{ V}, I_D = 15\text{ A}$ (Note 6)	–	12	–	S

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Table 2. ELECTRICAL CHARACTERISTICS ($T_J = 25^\circ\text{C}$ unless otherwise specified) (continued)

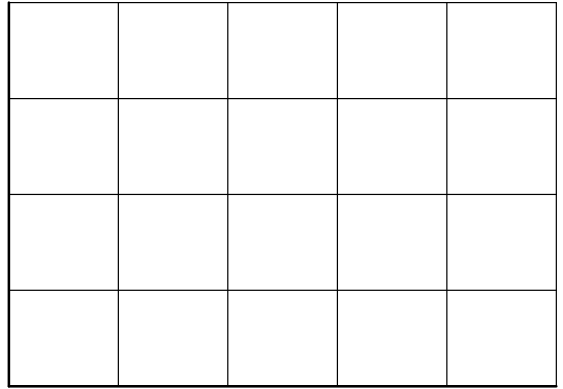
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
SOURCE-DRAIN DIODE CHARACTERISTICS						
Reverse Recovery Time	t_{RR}	$V_{GS} = 3.18\text{ V}, I_{SD} = 15\text{ A},$ $di_S/dt = 1000\text{ A}/\text{s}, V_{DS} = 800\text{ V}$ (Note 6)	–	14	–	ns
Reverse Recovery Charge	Q_{RR}		–	57	–	nC
Reverse Recovery Energy	E_{REC}		–	3.1	–	J
Peak Reverse Recovery Cu69 659.509 37.92828 .9071 re f 9 15.364 re f 535						

TYPICAL CHARACTERISTICS



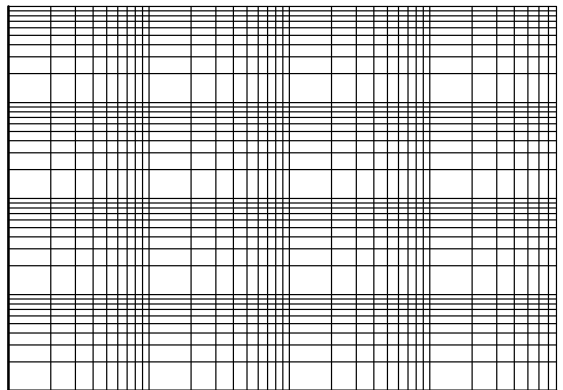
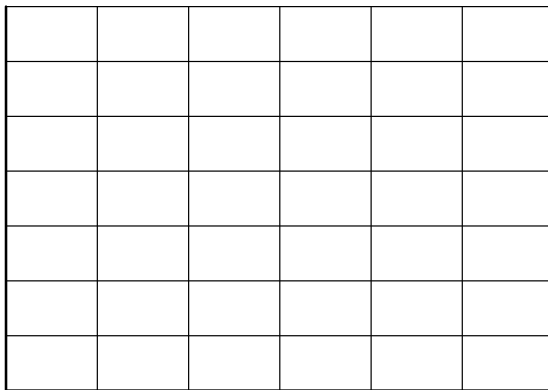
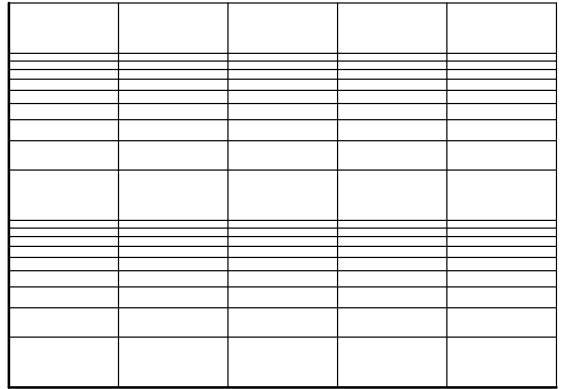
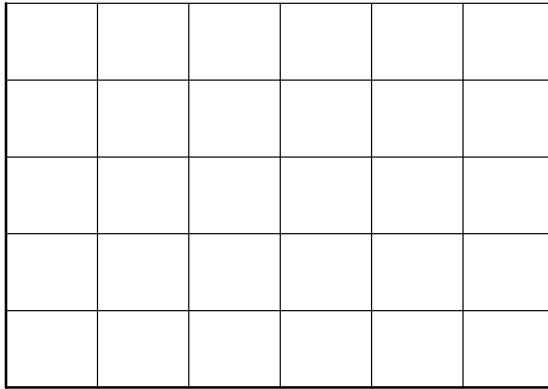
V_{DS} , DRAIN TO SOURCE VOLTAGE (V)

Figure 7. Switching Loss vs. Drain to Source Voltage



R

Figure 8. Switching Loss vs. Gate Resistance



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PACKAGE DIMENSIONS

TO i247 i3LD
CASE 340CX
ISSUE A

E

E2

D

L1

L

(3X) b

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