

**Features**

- Typ.  $R_{DS(on)} = 70\text{ m}\Omega @ V_{GS} = 18\text{ V}$   
Typ.  $R_{DS(on)} = 95\text{ m}\Omega @ V_{GS} = 15\text{ V}$
- Ultra Low Gate Charge ( $Q_{G(tot)} = 50\text{ nC}$ )
- Low Output Capacitance ( $C_{oss} = 89\text{ pF}$ )
- 100% Avalanche Tested
- $T_J = 175^\circ\text{C}$
- This Device is Pb-Free and is RoHS Compliant

**Typical Applications**

- SMPS (Switching Mode Power Supplies)
- Solar Inverters
- UPS (Uninterruptable Power Supplies)
- Energy Storage

**MAXIMUM RATINGS** ( $T_J = 25^\circ\text{C}$  unless otherwise noted)

Parameter		Symbol	Value	Unit	
Drain-to-Source Voltage		$V_{DSS}$	650	V	
Gate-to-Source Voltage		$V_{GS}$	-8/+22	V	
Recommended Operation Values of Gate-to-Source Voltage		$T_C < 175^\circ\text{C}$ $V_{GSop}$	-5/+18	V	
Continuous Drain Current (Note 1)	Steady State	$T_C = 25^\circ\text{C}$	$I_D$	31	A
			$P_D$	129	W
Continuous Drain Current (Note 1)	Steady State	$T_C = 100^\circ\text{C}$	$I_D$	22	A
			$P_D$	64	W
Pulsed Drain Current (Note 2)	$T_C = 25^\circ\text{C}$		$I_{DM}$	97	A
Operating Junction and Storage Temperature Range		$T_J, T_{stg}$	-55 to +175	$^\circ\text{C}$	
Source Current (Body Diode)		$I_S$	26	A	
Single Pulse Drain-to-Source Avalanche Energy ( $I_{L(pk)} = 9.4\text{ A}, L = 1\text{ mH}$ ) (Note 3)		$E_{AS}$	44	mJ	
Maximum Lead Temperature for Soldering (1/8" from case for 5 s)		$T_L$	260	$^\circ\text{C}$	

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. The entire application environment impacts the thermal resistance values shown, they are not cons. 5.726 4.195 15.386 3.288 14.876 2.495 14.252 1.758 13.572 1.191 12.778 .68 14.928 .283 1.964 .113 10 0 1S 1 0 0 1 42.359 59.584 cm 0 0

# NTH4L095N065SC1

## THERMAL RESISTANCE MAXIMUM RATINGS

Parameter
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# NTH4L095N065SC1

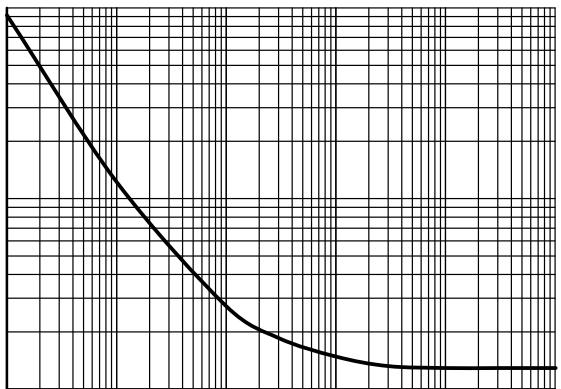
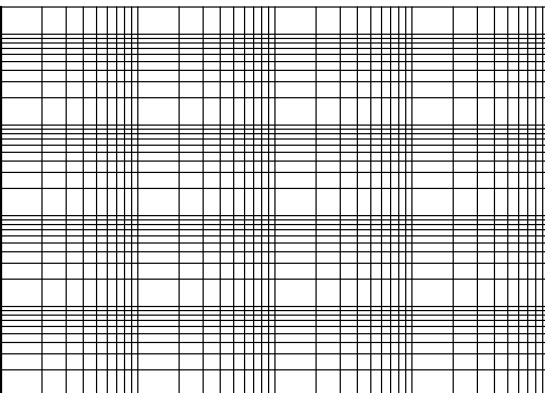
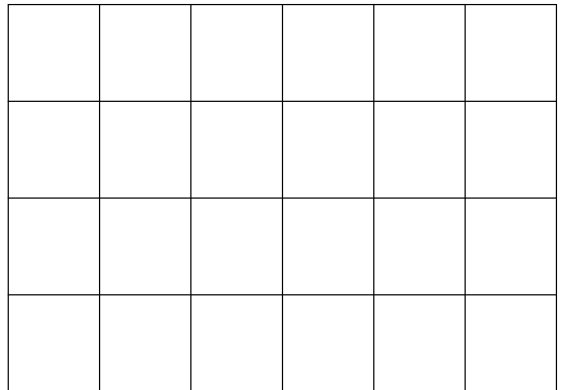
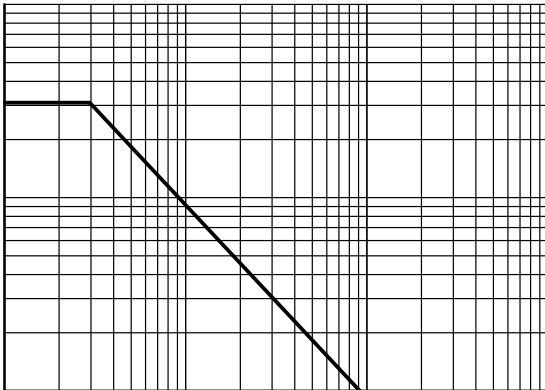
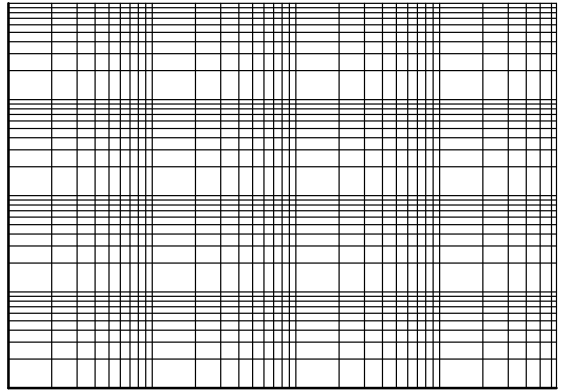
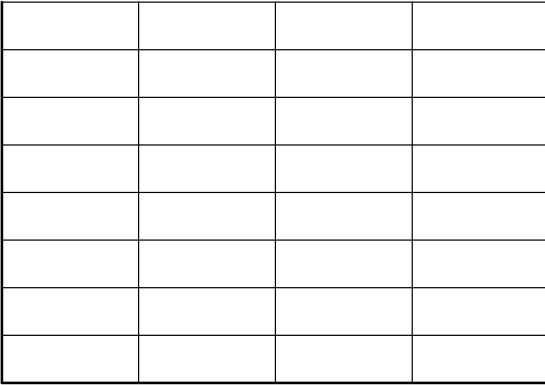
**ELECTRICAL CHARACTERISTICS** ( $T_J = 25^\circ\text{C}$  unless otherwise specified) (continued)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
<b>DRAIN-SOURCE DIODE CHARACTERISTICS</b>						
Reverse Recovery Time	$t_{RR}$	$V_{GS} = -5/18\text{ V}, I_{SD} = 12\text{ A},$ $dI_S/dt = 1000\text{ A}/\mu\text{s}$	-	15	-	ns
Reverse Recovery Charge	$Q_{RR}$		-	62	-	nC
Reverse Recovery Energy	$E_{REC}$		-	6.5	-	$\mu\text{J}$
Peak Reverse Recovery Current	$I_{RRM}$		-			

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## TYPICAL CHARACTERISTICS





TO-247-4LD  
CASE 340CJ  
ISSUE A

DATE 16 SEP 2019

A E A B  
A2 E1  $\emptyset$ p1  
D2

E/2 Q D1  
D

$\emptyset$   
L1

b2 A1

b1 (3X) L

1 4

e1 b(4X) c

e 2X

$\oplus$  0.254 (M) B A (M)

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