

NXV08H250DPT2

ORDERING INFORMATION

Part Number	Package	Pb-Free and RoHS Compliant	Operating Ambient Temperature Range	Packing Method
NXV08H250DPT2	APM17-MFA	yes	-40 125 C	Tube

Pin Configuration

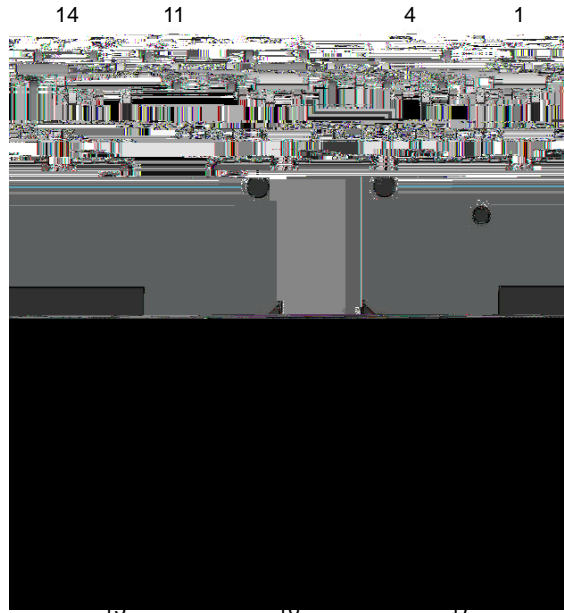


Figure 1. Pin Configuration

PIN DESCRIPTION

Pin No.	Description	Remark
1	Q2 Gate	Q2 Source Sense & Q4 Drain
2	Q2 Source Sense	

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ELECTRICAL CHARACTERISTICS (T_J = 25 C, unless otherwise noted)

	Characteristic	Condition	Min	Typ	Max	Unit
BVDSS	Drain-to-Source Breakdown Voltage					

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DYNAMIC AND SWITCHING CHARACTERISTICS (T_J = 25 C unless otherwise noted)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
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DYNAMIC CHARACTERISTICS

C _{iss}	Input Capacitance	V _{DS} = 40 V, V _{GS} = 0 V, f = 750 kHz	–	24350	–	pF
C _{oss}	Output Capacitance		–	3415	–	pF
C _{rss}	Reverse Transfer Capacitance		–	53	–	pF
R _g	Gate Resistance	f = 750 kHz	–	3.6	–	Ω
Q _{g(tot)}	Total Gate Charge	V _{GS} = 0 to 10 V, I _D = 160 A	–	320	–	nC
Q _{gs}	Gate to Source Gate Charge		–	150	–	nC
Q _{gd}	Gate to Drain "Miller" Charge		–	54	–	nC

SWITCHING CHARACTERISTICS

t _{on}	Turn-On Time	V _{DD} = 48 V, I _D = 400 A V _{GS} = 12 V, R _{G(on/off)} = 15/15 Ω	–	462	–	ns
t _{d(on)}	Turn-On Delay Time		–	164	–	ns
t _r	Turn-On Rise Time		–	298	–	ns
t _{d(off)}	Turn-Off Delay Time		–	476	–	ns
t _f	Turn-Off Fall Time		–	196	–	ns
t _{off}	Turn-Off Time		–	672	–	ns

DRAIN-SOURCE DIODE CHARACTERISTICS

Symbol	Parameter	Condition	Min	Typ	Max	Unit
t _{RR}	Reverse Recovery Time	V _{DD} = 48 V, I _D = 400 A V _{GS} = 14 V, R _{G(on/off)} = 3.9/8.2	–	55	–	ns
Q _{RR}	Reverse Recovery Charge		–	2005	–	nC

5. Dynamic & Switching characteristics data is by characterization test result and guaranteed by design factors.

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TYPICAL CHARACTERISTICS

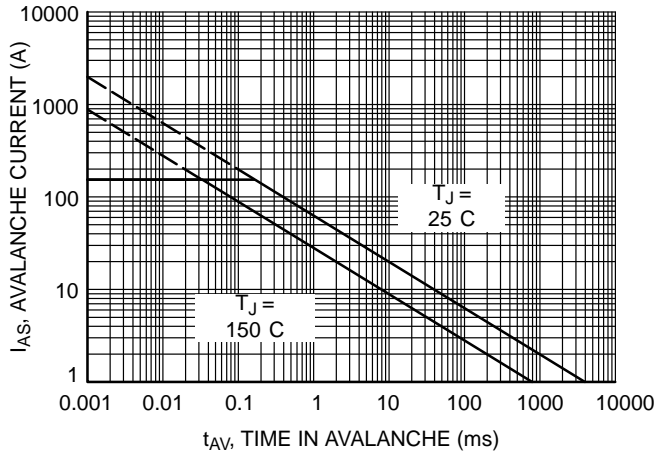


Figure 3. Unclamped Inductive Switching Capability

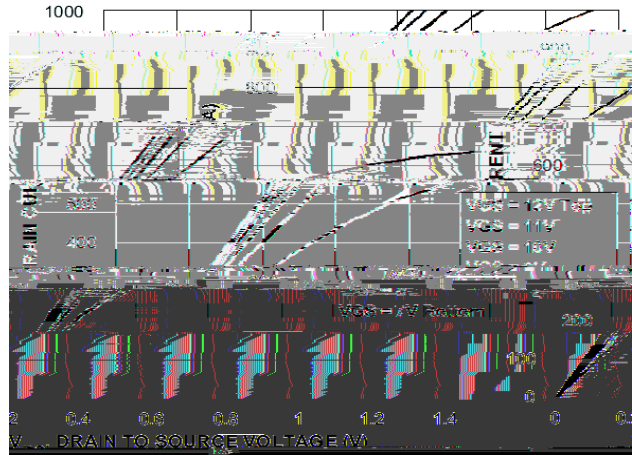


Figure 4. Saturation Characteristics

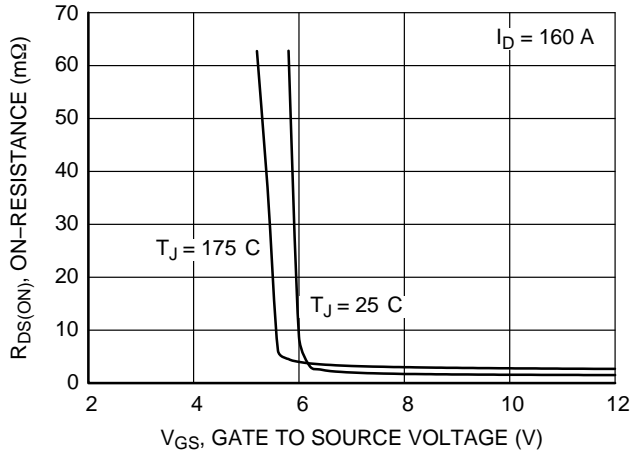


Figure 5. $R_{DS(ON)}$ vs. Gate Voltage

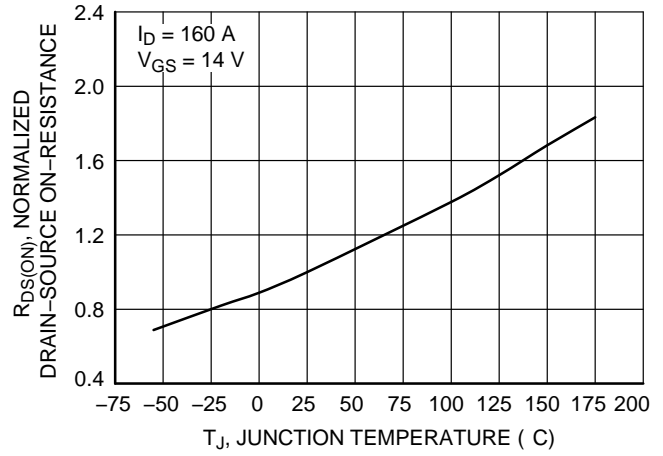


Figure 6. $R_{DS(ON)}$ vs. Temperature

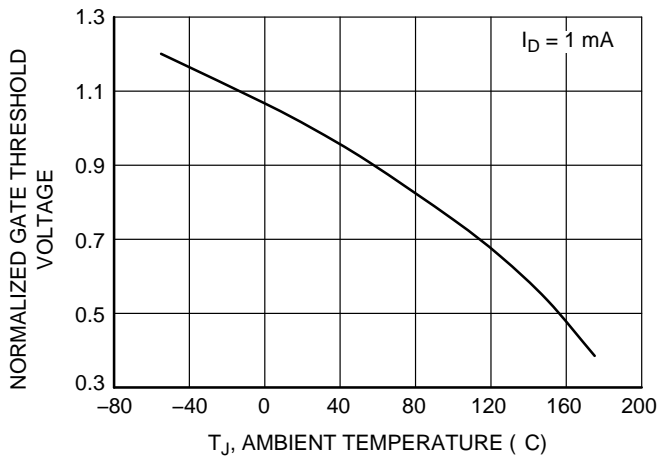


Figure 7. Normalized Gate Threshold Voltage vs. Temperature

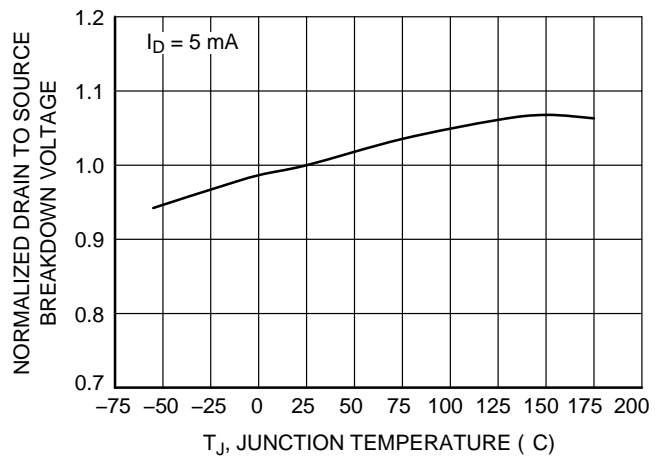


Figure 8. Normalized Drain to Source Breakdown Voltage vs. Junction Temperature

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TYPICAL CHARACTERISTICS

APM17-MFA, AUTOMOTIVE MODULE
CASE MODBM
ISSUE A

DATE 12 OCT 2022

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