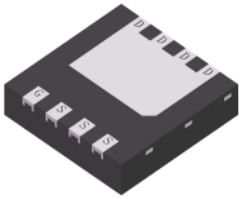
NB8266D

N-Channel 60-V Power MOSFET



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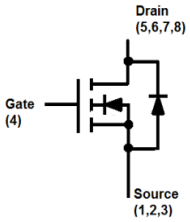


1. FEATURES

- Low RDS(on) trench technology.
- Low thermal impedance
- Fast switching speed
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

2. APPLICATION

- White LED boost converters
- Automotive Systems
- Industrial DC/DC Conversion Circuits

3. ORDERING INFORMATION

Device	Marking	Shipping
NB8266D	N66	2000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25ºC)

Parameter		Symbol	Limit	Units
Drain-Source Voltage		VDS	60	V
Gate-Source Voltage		VGS	±20	
Continuous Drain Current (Note 1)	TA=25°C	ID	9	A
	TA=70°C		7	
Pulsed Drain Current (Note 2)		IDM	40	
Continuous Source Current (Diode Conduction)(Note 1)		IS	4.6	A
Power Dissipation(Note 1)	TA =25°C	PD	5	W
	TA =70°C		3.2	
Operating Junction and Storage Temperature Range		TJ,Tstg	-55 to 150	°C

5. THERMAL CHARACTERISTICS

Parameter		Symbol	Maximum	Units
Maximum Junction-to-Ambient(Note 1)	t ≤ 10sec	$R_{\theta JA}$	39	°C/W
	Steady State		85	

1.Surface Mounted on 1” x 1” FR4 Board.

2.Pulse width limited by maximum junction temperature

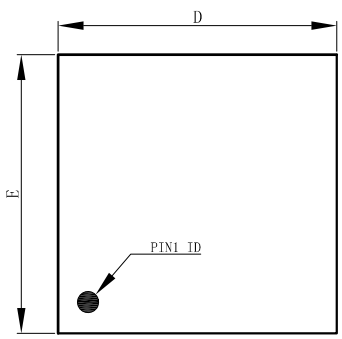
6.ELECTRICAL CHARACTERISTICS CURVES

Characteristic		Symbol	Min.	Typ.	Max.	Unit
Static						
Drain–Source Breakdown Voltage (VGS = 0, ID = 250μA)		V(BR)DSS	60	-	-	V
Gate Threshold Voltage (VDS = VGS, ID = 250μA)		VGS(th)	1	-	-	V
Gate Body Leakage (VDS =0V, VGS =±20V)		IGSS	-	-	±10	μA
Zero Gate Voltage Drain Current (VDS =48V, VGS =0V) (VDS =48V, VGS =0V,TJ = 55°C)		IDSS	- -	- -	1 25	μA
Static Drain–Source On–State Resistance (VGS = 10 V, ID = 10.4 A) (VGS = 4.5 V, ID = 7.2 A)		RDS(on)	- -	16.5 20.5	20 24	mΩ
Diode Forward Voltage (IS = 2.3 A, VGS = 0 V)		VSD	-	0.7	-	V
Dynamic						
Total Gate Charge	(VDS = 30 V, VGS = 4.5 V, ID = 10.4 A)	Qg	-	20	-	nC
Gate-Source Charge		Qgs	-	5.8	-	
Gate-Drain Charge		Qgd	-	10	-	
Input capacitance	(VDS = 15 V, VGS = 0 V, f = 1 MHz)	Ciss	-	2086	-	pF
Output Capacitance		Coss	-	174	-	
Reverse Transfer Capacitance		Crss	-	160	-	
Turn-On Delay Time	(VDS=30 V,RL=2.9 Ω,ID=10.4A,VGEN=10V,RG=6 Ω)	td(on)	-	10	-	ns
Turn-On Rise Time		tr	-	24	-	
Turn-Off Delay Time		td(off)	-	67	-	
Turn-Off Fall Time		tf	-	37	-	

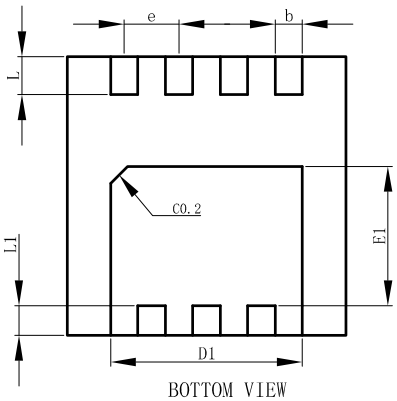
3.Pulse test; pulse width≤300μs, duty cycle≤2%.

4.Guaranteed by design, not subject to production testing.

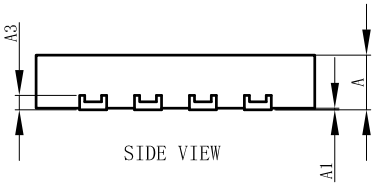
7.OUTLINE AND DIMENSIONS



TOP VIEW



BOTTOM VIEW



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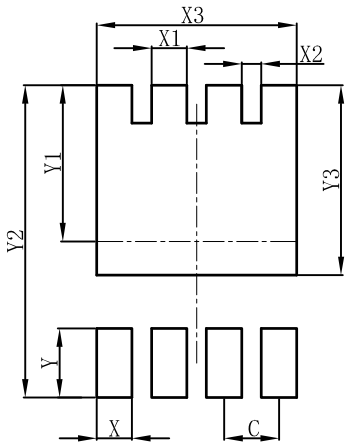
DIM	MIN	NOR	MAX
A	0.60	0.65	0.70
A1	0.00	0.03	0.05
b	0.27	0.32	0.37
D	3.25	3.30	3.35
E	3.25	3.30	3.35
D1	2.22	2.27	2.32
E1	1.60	1.65	1.70
e	0.65BSC		
L	0.40	0.45	0.50
L1	0.30	0.35	0.40
A3	0.152REF.		
All Dimensions in mm			

8.SOLDERING FOOTPRINT



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DIM	(mm)
C	0.65
X	0.42
X1	0.42
X2	0.23
X3	2.37
Y	0.70
Y1	1.85
Y2	3.70
Y3	2.25