

N3426D

30V N-Channel Enhancement MOSFET

1. FEATURES

- VDS = 30 V
RDS(ON) ≤ 16mΩ, VGS@10V, IDS@5A
RDS(ON) ≤ 22mΩ, VGS@4.5V, IDS@4A
- Low RDS(ON) trench technology
- Low thermal impedance
- Fast switching speed
- We declare that the material of product are Halogen Free and compliance with RoHS requirements.

2. APPLICATIONS

- DC/DC Conversion
- Power Routing
- Motor Drives

3. ORDERING INFORMATION

Device	Marking	Shipping
N3426D	30N	4000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25°C unless otherwise stated)

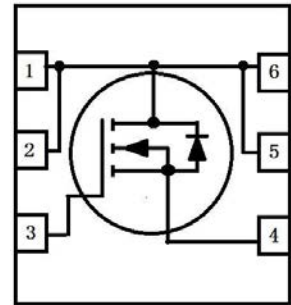
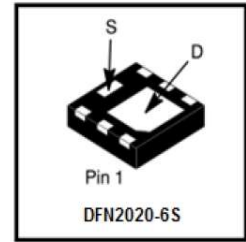
Parameter	Symbol	Limits	Unit	
Drain-to-Source Voltage	VDSS	30	V	
Gate-to-Source Voltage	VGS	±20	V	
Continuous Drain Current(Note 1)	ID	TA =25°C	9	A
		TA =70°C	6	
Pulsed Drain Current (Note 2)	IDM	36	A	
Continuous Source Current (Diode Conduction)(Note 1)	IS	3	A	
Power Dissipation(Note 1)	PD	TA =25°C	2.4	W
		TA =70°C	1.4	
Operating Junction and Storage Temperature Range	TJ , TSTG	-55 ~+150	°C	

Note: 1.Surface Mounted on 1" x 1" FR4 Board.

2.Pulse width limited by maximum junction temperature.

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit	
Maximum Junction-to-Ambient (Note 1)	RθJA	t ≤ 10S	40	°C/W
		Steady State	90	



6. ELECTRICAL CHARACTERISTICS

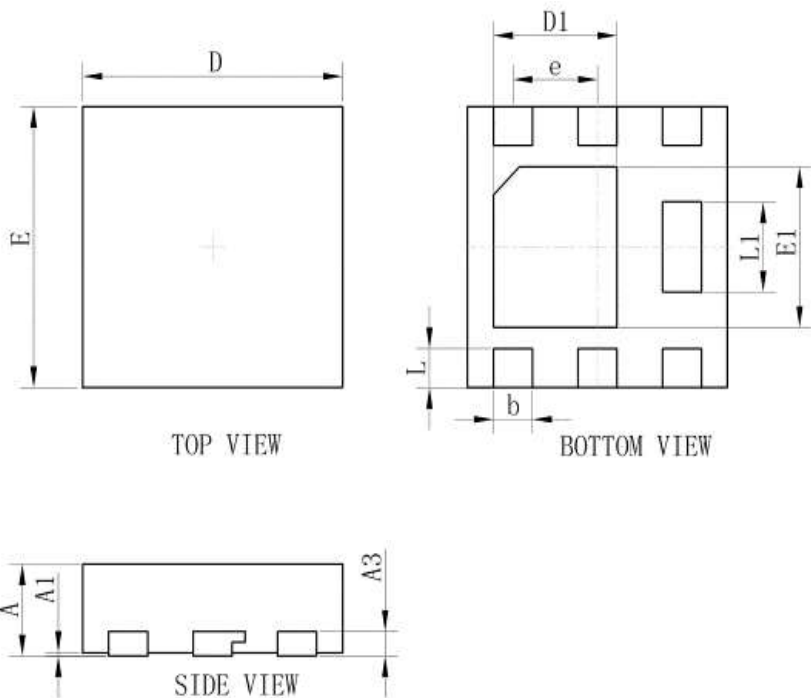
Characteristic	Symbol	Min.	Typ.	Max.	Unit	
Static						
Gate-Source Threshold Voltage (VDS = VGS , ID = 250 μ A)	VGS(th)	1		2.5	V	
Gate-Body Leakage (VDS = 0 V, VGS = \pm 20 V)	IGSS	-	-	\pm 100	nA	
Zero Gate Voltage Drain Current (VDS = 24 V, VGS = 0 V) (VDS = 24 V, VGS = 0 V, TJ = 55°C)	IDSS	-	-	1 25	μ A	
On-State Drain Current(Note 3) (VDS = 5 V, VGS = 10 V)	ID(on)	20	-	-	A	
Drain-Source On-Resistance(Note 3) (VGS = 10 V, ID = 5 A) (VGS = 4.5 V, ID = 4 A)	RDS(on)	-	12 16	16 22	m Ω	
Forward Transconductance(Note 3) (VDS = 15 V, ID = 7 A)	gfs	-	11	-	S	
Diode Forward Voltage(Note 3) (IS = 1.9 A, VGS = 0 V)	VSD	-	0.9	1.5	V	
Dynamic(Note 4)						
Total Gate Charge	(VDS = 15 V, VGS = 4.5 V, ID = 4 A)	Qg	-	9.47	-	nC
Gate-Source Charge		Qgs	-	2.35	-	
Gate-Drain Charge		Qgd	-	3.63	-	
Turn-On Delay Time	(VDS = 15 V, RL=1.4 Ω ,ID =6 A,VGEN = 10 V, RGEN = 6 Ω)	td(on)	-	6	-	ns
Rise Time		tr	-	6	-	
Turn-Off Delay Time		td(off)	-	29	-	
Fall Time		tf	-	8	-	
Input Capacitance	(VDS = 15 V, VGS = 0 V, f = 1 Mhz)	Ciss	-	1136	-	pF
Output Capacitance		Coss	-	102.5	-	
Reverse Transfer Capacitance		Crss	-	91	-	
Gate-Resistance (VDS=0V,VGS=0V,f=1.0MHz)	Rg	-	0.21	-	Ω	

Note: 3.Pulse test: PW \leq 300us duty cycle \leq 2%.

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

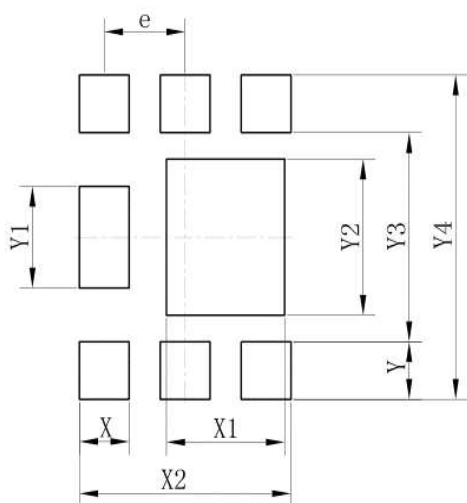


8.OUTLINE AND DIMENSIONS



DFN2020-6S			
DIM	MIN	NOR	MAX
A	0.60	0.65	0.70
A1	0.01	0.03	0.05
b	0.25	0.30	0.35
D	1.95	2.00	2.05
E	1.95	2.00	2.05
e	0.65TYP.		
L	0.23	0.28	0.33
L1	0.60	0.65	0.65
D1	0.90	0.95	1.00
E1	1.10	1.15	1.20
A3	0.152REF		
All Dimensions in mm			

9.SOLDERING FOOTPRINT



DFN2020-6S	
Dim	(mm)
X	0.40
X1	0.95
X2	1.70
e	0.65
Y	0.43
Y1	0.75
Y2	1.15
Y3	1.54
Y4	2.39

