

Product Specification

AON3419

P-Channel Enhancement Mode MOSFET

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Descriptions

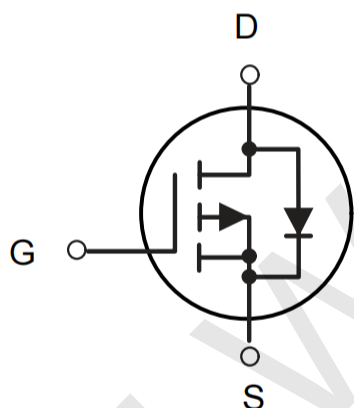
The AON3419 uses advanced trench technology and design to provide excellent $R_{DS(ON)}$ with low gate charge. This device is well suited for high current load applications.

Features

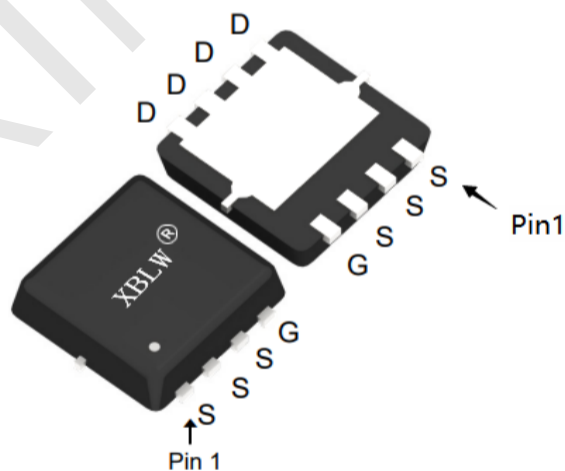
- $V_{DS} = -30V, I_D = -32A$
- $R_{DS(ON)} < 12m\Omega$ @ $V_{GS} = -10V$
- $R_{DS(ON)} < 18m\Omega$ @ $V_{GS} = -4.5V$

Applications

- High side switch for full bridge converter
- DC/DC converter for LCD display



P-Channel MOSFET



DFN3X3-8L

Ordering Information

Product Model	Package Type	Marking	Packing	Packing Qty
AON3419	DFN3x3-8L	AON3419	Tape	5000Pcs/Reel

Absolute Maximum Ratings@T_j=25 °C(unless otherwise specified)

Symbol	Paramete	Rating	Units
V _{DS}	Drain-Source Voltage	-30	V
V _{GS}	Gate-Source Voltage	±25	V
I _D @T _A =25°C	Drain Current ³ , V _{GS} @ 10V	-32	A
I _D @T _A =70°C	Drain Current ³ , V _{GS} @ 10V	-9.8	A
IDM	Pulsed Drain Current ¹	-65	A
PD@T _A =25°C	Total Power Dissipation	3.57	W
TSTG	Storage Temperature Range	-55 to 150	°C
T _j	Operating Junction Temperature Range	-55 to 150	°C
R _{thj-c}	Maximum Thermal Resistance, Junction-case	6	°C/W
R _{thj-a}	Maximum Thermal Resistance, Junction-ambient ³	35	°C/W

Electrical Characteristics@T_j=25°C (unless otherwise specified)

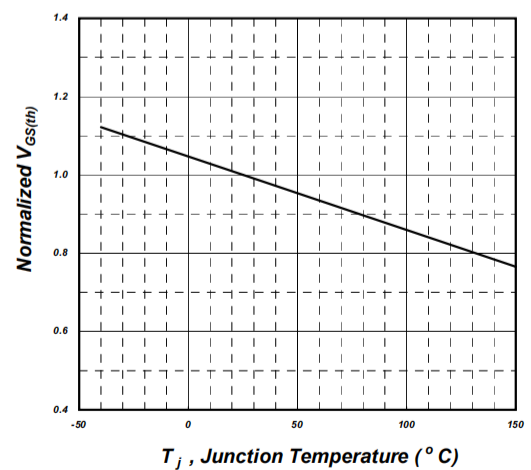
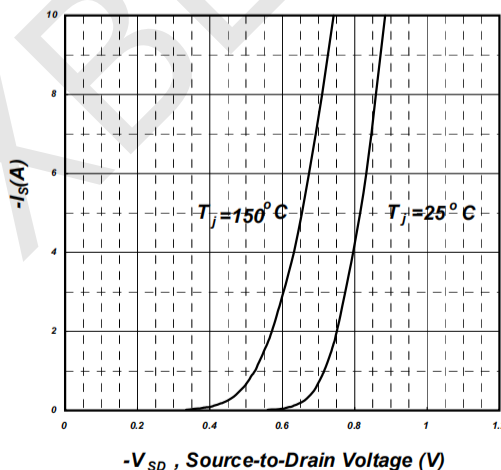
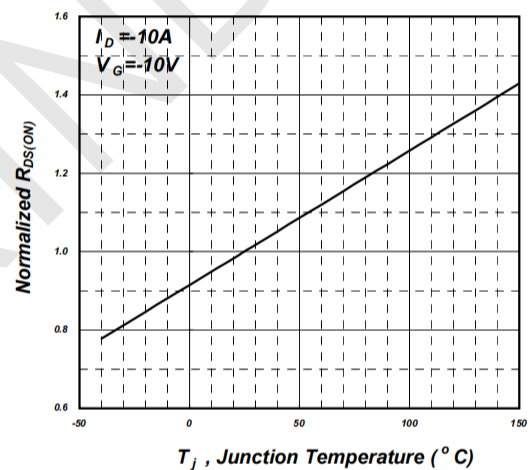
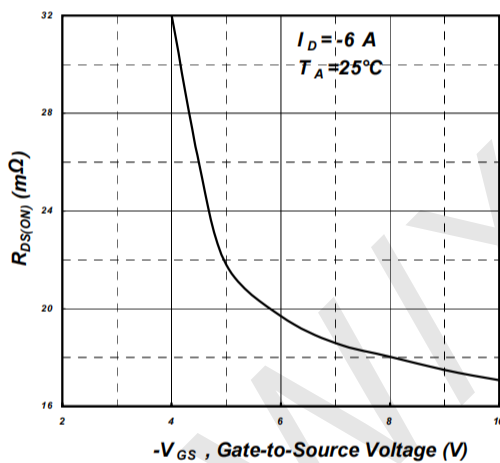
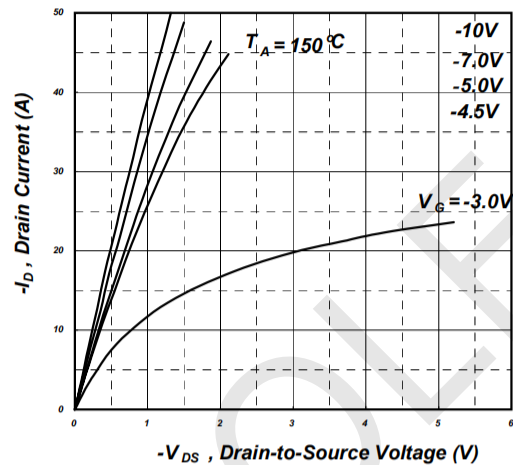
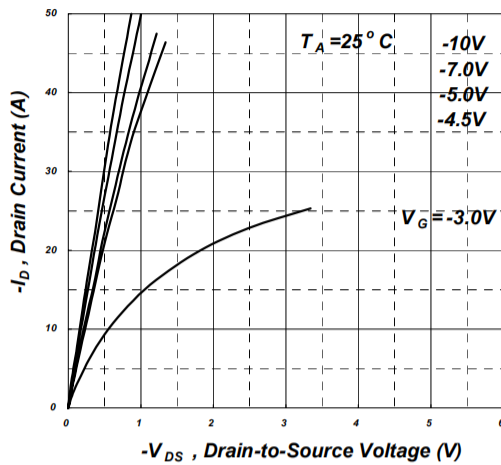
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =-250uA	-30	-	-	V
R _{DS(ON)}	Static Drain-Source On-Resistance ²	V _{GS} =-10V, I _D =-15A	-	10	12	mΩ
		V _{GS} =-4.5V, I _D =-10A	-	14	18	mΩ
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =-250uA	-1	1.95	-2.5	V
g _{fs}	Forward Transconductance	V _{DS} =-10V, I _D =-6A	-	19	-	S
IDSS	Drain-Source Leakage Current	V _{DS} =-24V, V _{GS} =0V	-	-	-30	uA
IGSS	Gate-Source Leakage	V _{GS} =±20V, V _{DS} =0V	-	-	±100	nA
Q _g	Total Gate Charge	I _D =-15A V _{DS} =-15V V _{GS} =-4.5V	-	12.5	24	nC
Q _{gs}	Gate-Source Charge		-	5.4	-	nC
Q _{gd}	Gate-Drain ("Miller") Charge		-	5	-	nC
td(on)	Turn-on Delay Time	V _{DS} =-15V I _D =-15A R _G =3.3Ω V _{GS} =-10V	-	4.4	-	ns
t _r	Rise Time		-	11.2	-	ns
td(off)	Turn-off Delay Time		-	34	-	ns
t _f	Fall Time		-	18	-	ns
C _{iss}	Input Capacitance	V _{GS} =0V V _{DS} =-15V f=1.0MHz. I _S =-15A, V _{GS} =0V, dI/dt=100A/μs	-	1345	2000	pF
C _{oss}	Output Capacitance		-	194	-	pF
C _{rss}	Reverse Transfer Capacitance		-	158	-	pF
trr	Reverse Recovery Time		-	12.4	-	ns
Q _{rr}	Reverse Recovery Charge		-	5	-	nC

Notes:

1.Pulse width limited by Max. junction temperature.

2.Pulse test

Typical Characteristics



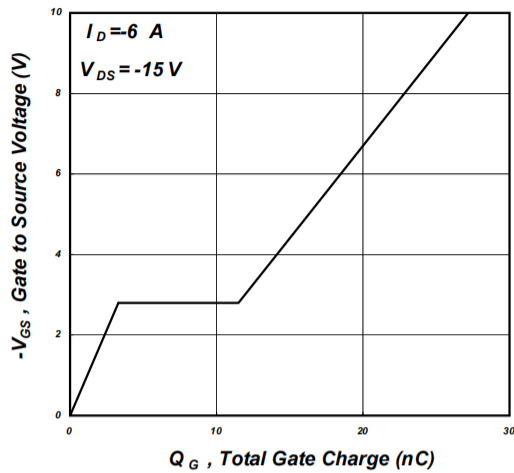


Fig 7. Gate Charge Characteristics

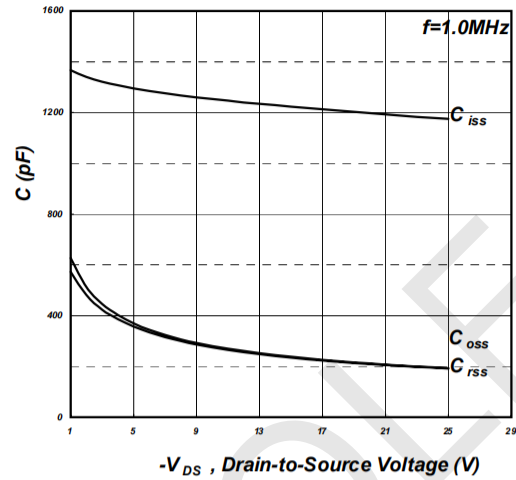


Fig 8. Typical Capacitance Characteristics

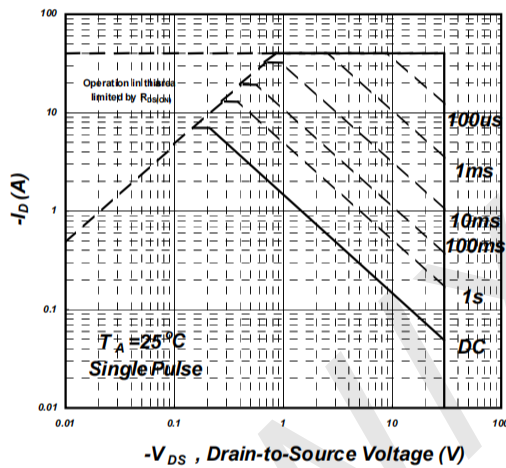


Fig 9. Maximum Safe Operating Area

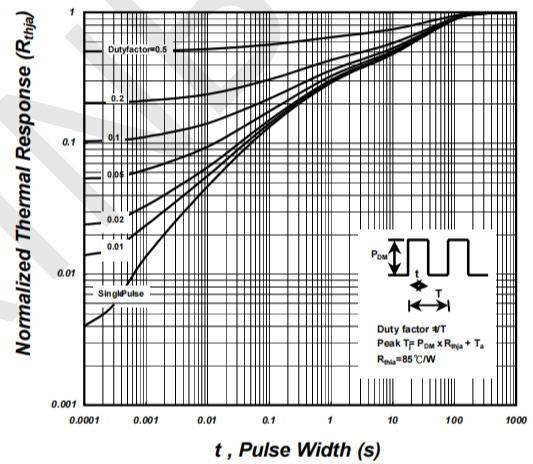


Fig 10. Effective Transient Thermal Impedance

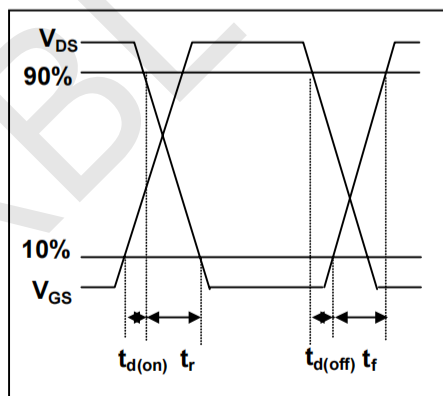


Fig 11. Switching Time Waveform

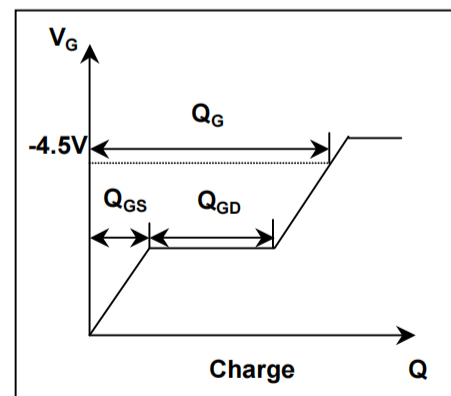
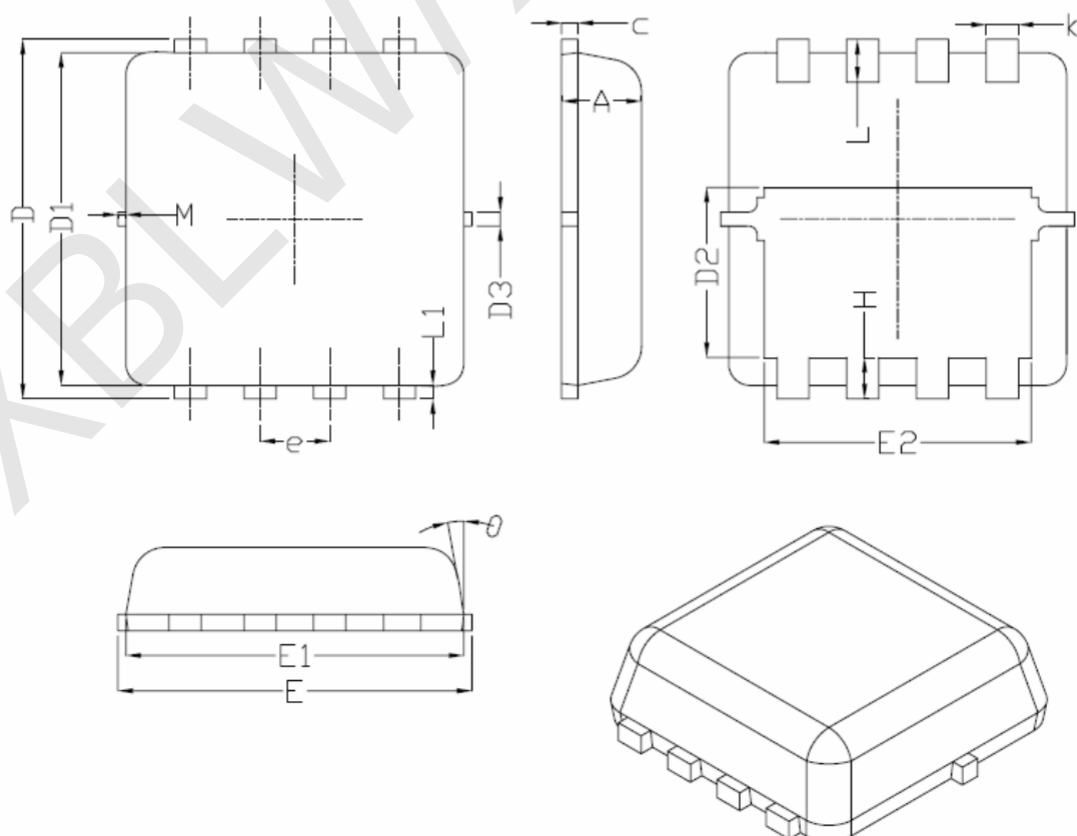


Fig 12. Gate Charge Waveform

Package Information

DFN3X3-8L

Symbol	Dimensions In Millimeters		
	Min.	Nom.	Max.
A	0.70	0.75	0.80
b	0.25	0.30	0.35
c	0.10	0.15	0.25
D	3.25	3.35	3.45
D1	3.00	3.10	3.20
D2	1.48	1.58	1.68
D3	-	0.13	-
E	3.20	3.30	3.40
E1	3.00	3.15	3.20
E2	2.39	2.49	2.59
e	0.65BSC		
H	0.30	0.39	0.50
L	0.30	0.40	0.50
L1	-	0.13	-
M	*	*	0.15
θ		10°	12°



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