

Features

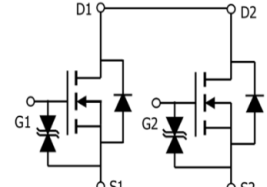
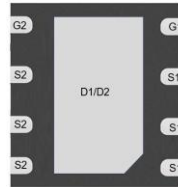
- Advanced high cell density Trench technology
- ESD Rating: $\geq 2000V$ HBM
- Excellent CdV/dt effect decline
- Green Device Available

Application

- Battery Protection
- Load Switch

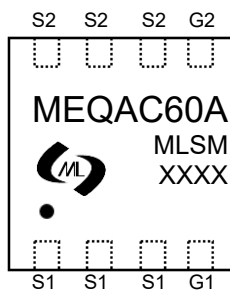
Product Summary

V_{DS}	$R_{DS(ON)}$ TYP	I_D
18V	2.4m Ω @4.5V	60A
	3.4m Ω @2.5V	



DFN3X3-8L view

Schematic diagram



MEQAC60A : Device code
 XXXX : Code

Marking and pin assignment



Halogen-Free

Absolute Maximum Ratings (TA=25°C unless otherwise noted)

Symbol	Parameter	Rating	Unit
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Common Ratings (TC=25°C Unless Otherwise Noted)

V _{DS}	Drain-Source Breakdown Voltage		18	V
V _{GS}	Gate-Source Voltage		±12	V
T _J	Maximum Junction Temperature		150	°C
T _{STG}	Storage Temperature Range		-55 to 150	°C
I _S	Diode Continuous Forward Current	Tc=25°C	60	A

Mounted on Large Heat Sink

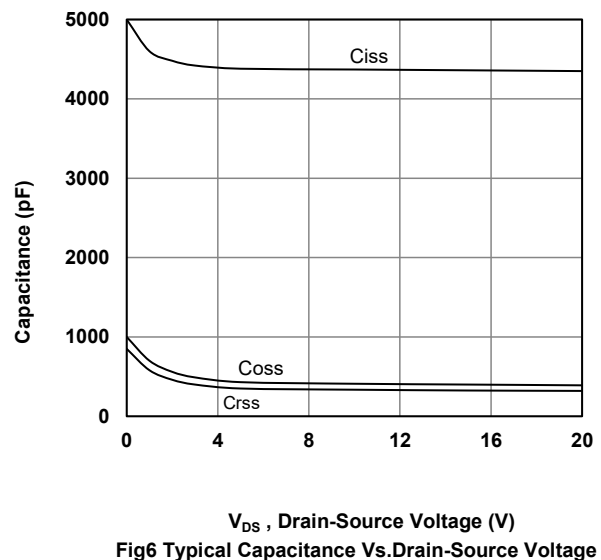
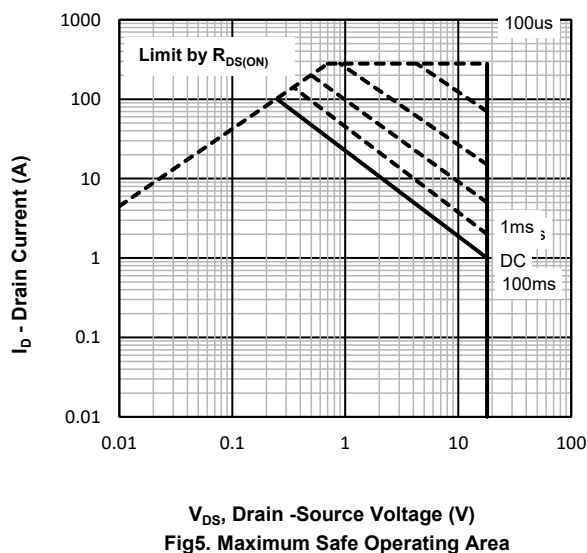
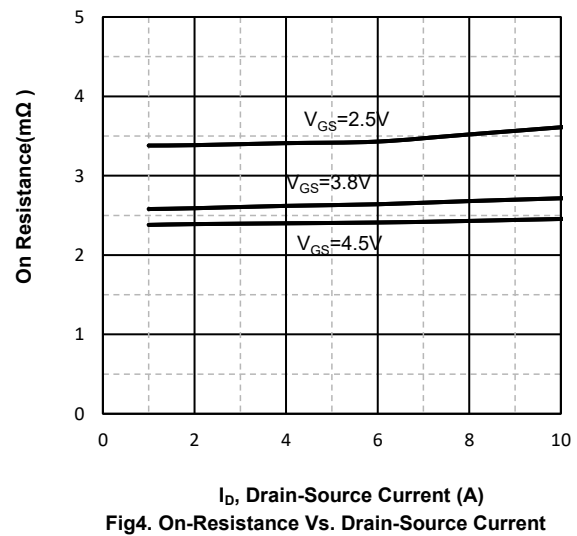
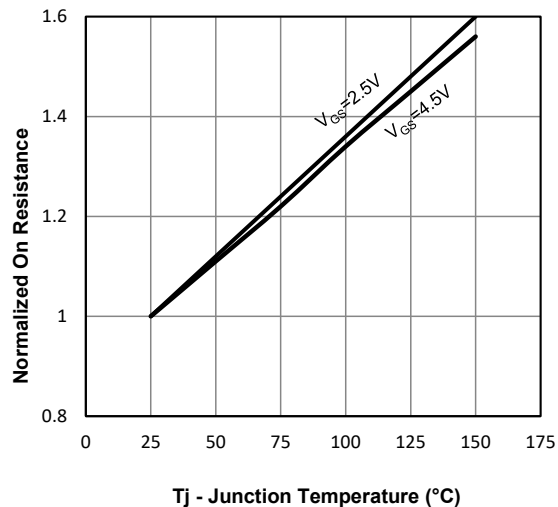
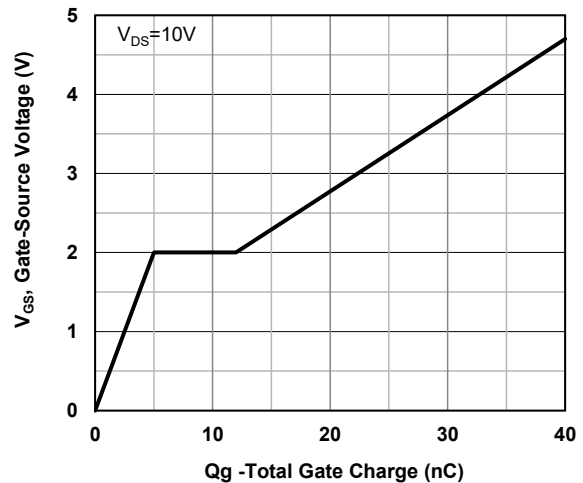
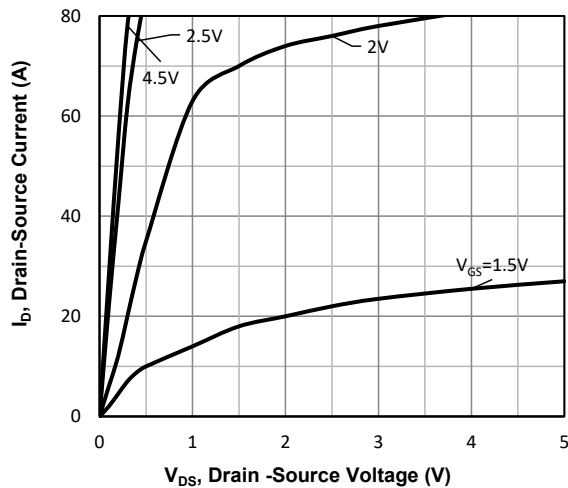
I_{DM}	Pulse Drain Current Tested	$T_c=25^\circ C$	280	A
I_D	Continuous Drain Current	$T_c=25^\circ C$	60	A
P_D	Maximum Power Dissipation	$T_c=25^\circ C$	16.5	W
$R_{\theta JA}$	Thermal Resistance Junction-Ambient		45	°C/W

Ordering Information (Example)

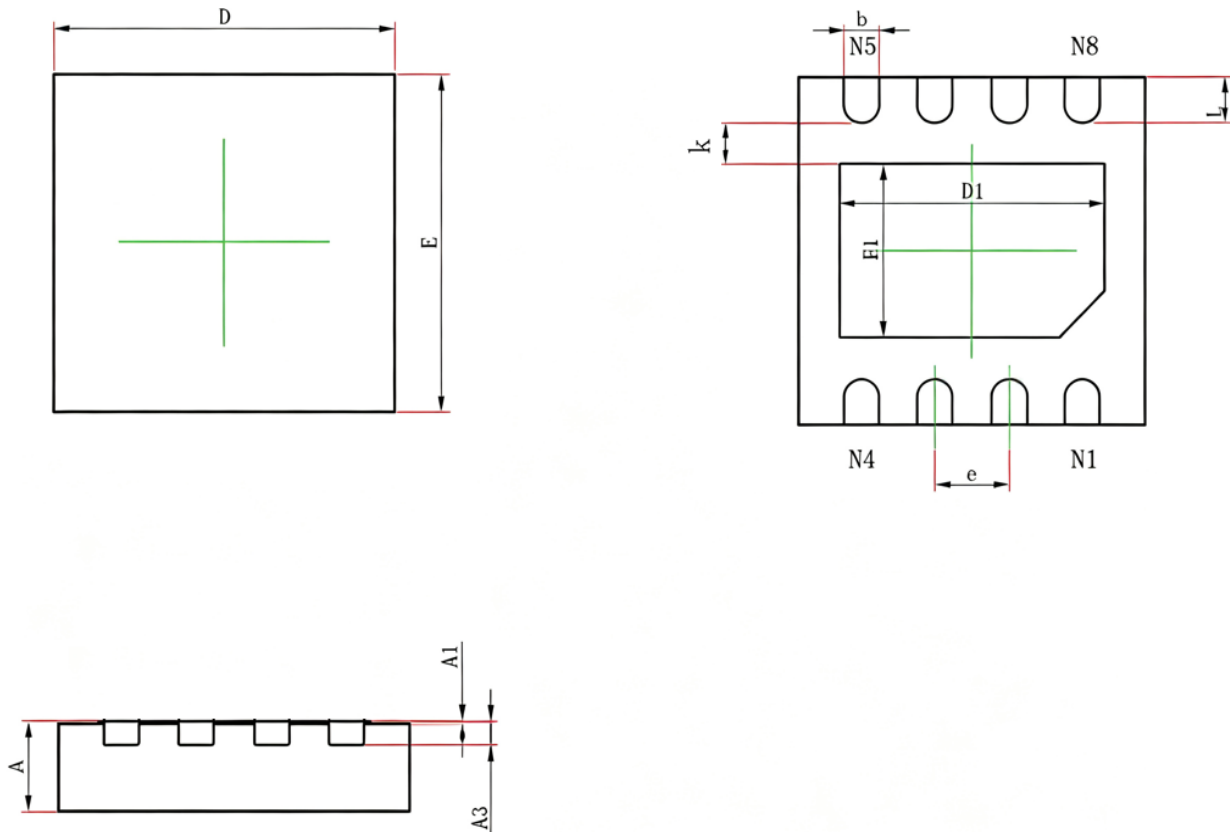
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
MEQAC60A	DFN3X3-8L	MEQAC60A	5,000	10,000	70,000	13"reel

Electrical Characteristics (TJ=25°C unless otherwise noted)						
Symbol	Parameter	Condition	Min	Typ	Max	Unit
Static Electrical Characteristics @ TJ = 25°C (unless otherwise stated)						
BV _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250μA	18	20.5	–	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =16V, V _{GS} =0V	–	–	1	μA
I _{GSS}	Gate-Body Leakage Current	V _{GS} =±12V, V _{DS} =0V	–	–	±10	μA
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =250μA	0.5	0.7	1	V
R _{DS(on)}	Drain-Source On-State Resistance	V _{GS} =4.5V, I _D =6A	–	2.4	3	mΩ
		V _{GS} =3.8V, I _D =5A	–	2.8	3.5	mΩ
		V _{GS} =2.5V, I _D =3A	–	3.4	4.5	mΩ
Dynamic Electrical Characteristics @ TJ = 25°C (unless otherwise stated)						
C _{ISS}	Input Capacitance	V _{DS} =10V, V _{GS} =0V, f=1MHz	–	4300	–	pF
C _{OSS}	Output Capacitance		–	430	–	pF
C _{RSS}	Reverse Transfer Capacitance		–	350	–	pF
Switching Characteristics						
Q _g	Total Gate Charge	V _{DS} =10V, I _D =8A, V _{GS} =4.5V	–	38	–	nC
Q _{gs}	Gate Source Charge		–	5.3	–	nC
Q _{gd}	Gate Drain Charge		–	7.2	–	nC
t _{d(on)}	Turn-on Delay Time	V _{DD} =10V, I _D =8A, V _{GS} =4.5V, R _G =3Ω	–	20	–	nS
t _r	Turn-on Rise Time		–	35	–	nS
t _{d(off)}	Turn-Off Delay Time		–	95	–	nS
t _f	Turn-Off Fall Time		–	85	–	nS
Source- Drain Diode Characteristics						
V _{SD}	Forward on voltage	T _J =25°C, I _S =1A	–	–	1.2	V

Typical Operating Characteristics



DFN3X3-8L Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.700	0.800	0.028	0.032
A1	0.000	0.050	0.000	0.002
A3	0.203REF.		0.008REF.	
D	2.900	3.100	0.115	0.123
E	2.900	3.100	0.115	0.123
D1	2.200	2.400	0.087	0.095
E1	1.400	1.600	0.055	0.063
b	0.250	0.350	0.010	0.014
k	0.350REF.		0.014REF.	
e	0.650TYP		0.026TYP	
H	0.324	0.476	0.013	0.019