

Features

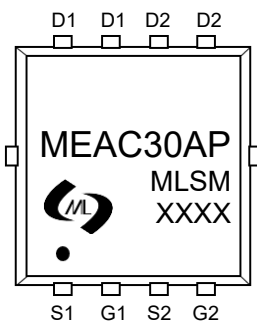
- Advanced high cell density Trench technology
- Super Low Gate Charge
- Excellent CdV/dt effect decline
- Green Device Available

Product Summary

V_{DS}	$R_{DS(ON)}$ TYP	I_D
-20V	10mΩ@-4.5V	-30A
	13mΩ@-2.5V	

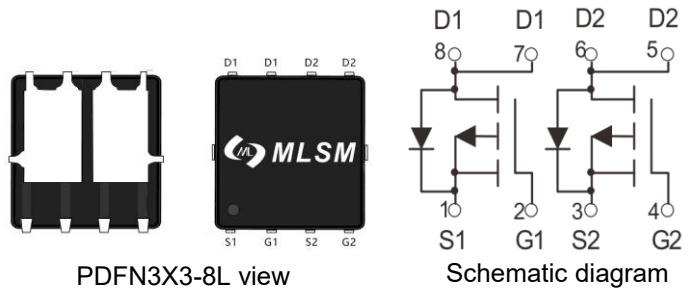
Application

- High Frequency Point-of-Load Synchronous Buck Converter for MB/NB/UMPC/VGA
- Networking DC-DC Power System
- Load Switch



MEAC30AP : Device code
XXXX : Code

Marking and pin assignment



Halogen-Free

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

Symbol	Parameter	Rating	Unit
Common Ratings (TC=25°C Unless Otherwise Noted)			
V_{DS}	Drain-Source Breakdown Voltage	-20	V
V_{GS}	Gate-Source Voltage	±12	V
T_J	Maximum Junction Temperature	150	°C
T_{STG}	Storage Temperature Range	-50 to 155	°C
I_S	Diode Continuous Forward Current	$T_c=25^\circ\text{C}$ -30	A
Mounted on Large Heat Sink			
I_{DM}	Pulse Drain Current Tested	$T_c=25^\circ\text{C}$ -120	A
I_D	Continuous Drain Current	$T_c=25^\circ\text{C}$ -30	A
P_D	Maximum Power Dissipation	$T_c=25^\circ\text{C}$ 30	W
$R_{\theta JA}$	Thermal Resistance Junction-Ambient	47	°C/W

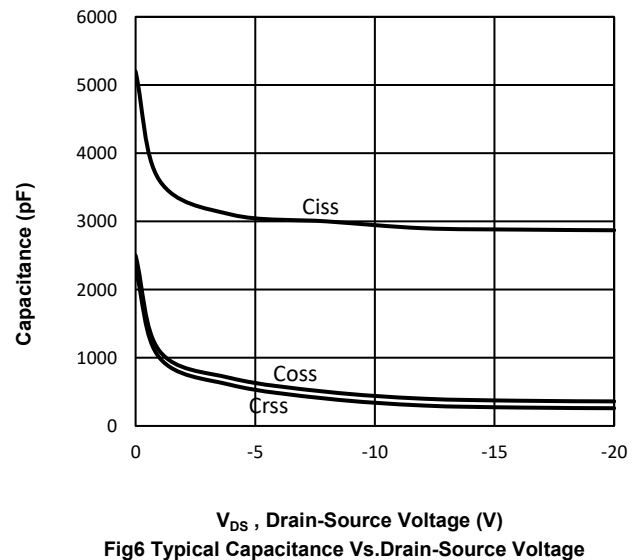
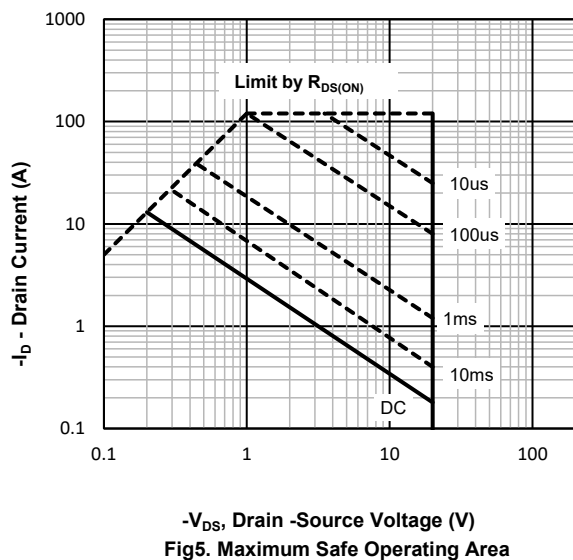
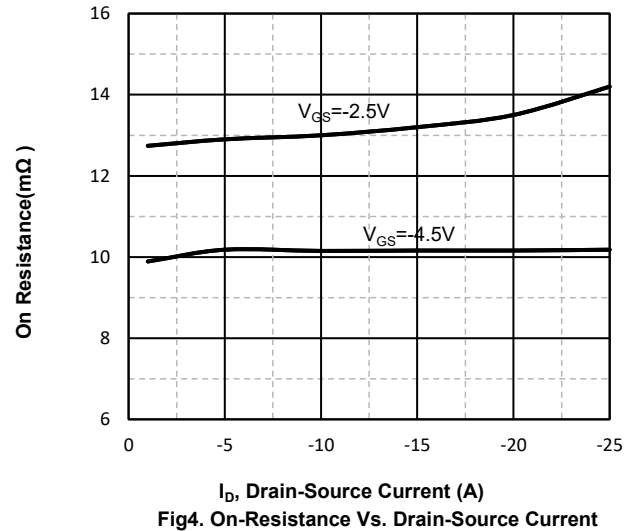
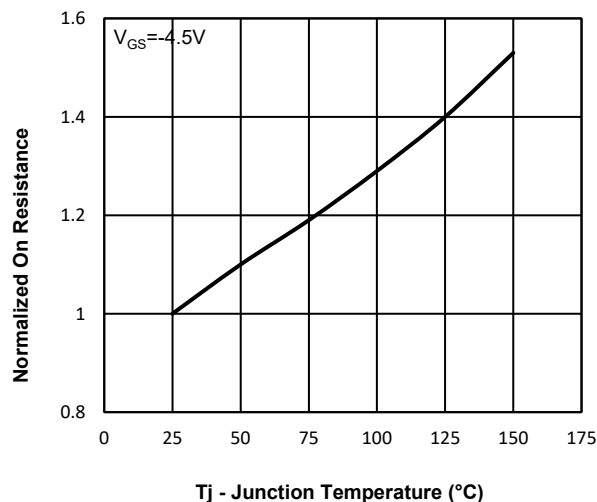
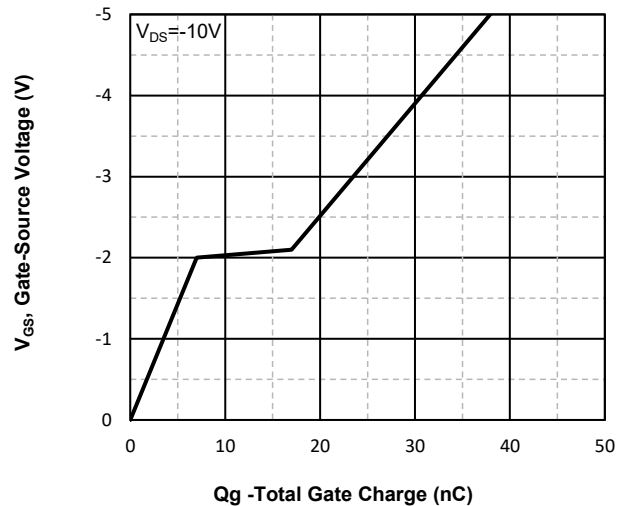
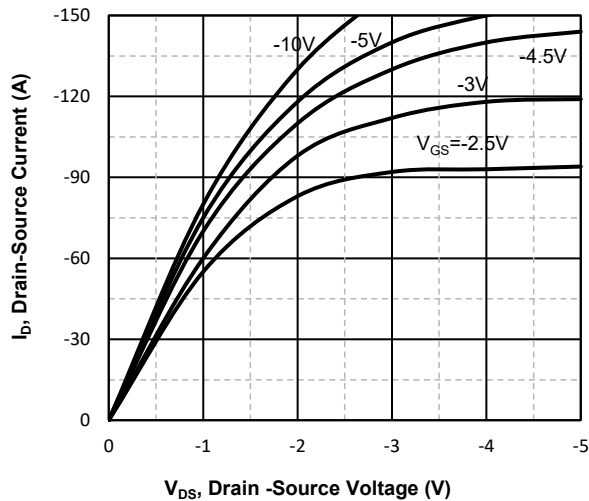
Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
MEAC30AP	PDFN3X3-8L	MEAC30AP	5,000	10,000	70,000	13"reel

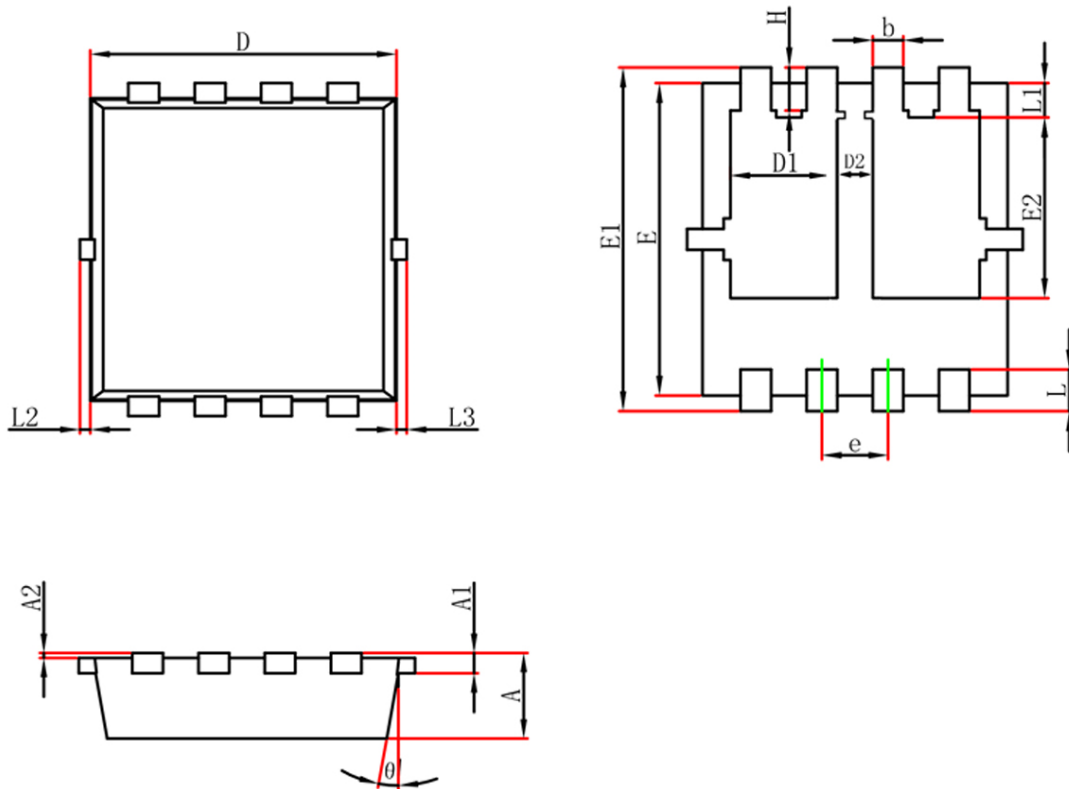
Electrical Characteristics (T_J=25°C unless otherwise noted)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
Static Electrical Characteristics @ TJ = 25°C (unless otherwise stated)						
BV(BR)DSS	Drain-Source Breakdown Voltage	VGS=0V, ID=-250μA	-20	--	--	V
IDSS	Zero Gate Voltage Drain Current	VDS=-20V, VGS=0V	--	--	-1.0	μA
IGSS	Gate-Body Leakage Current	VGS=±12V, VDS=0V	--	--	±100	nA
VGS(th)	Gate Threshold Voltage	VDS=VGS, ID=-250μA	-0.5	--	-1.5	V
RDS(on)	Drain-Source On-State Resistance	VGS=-4.5V, ID=-20A	--	10	13	mΩ
		VGS=-2.5V, ID=-10A	--	13	18	mΩ
Dynamic Electrical Characteristics @ TJ = 25°C (unless otherwise stated)						
Ciss	Input Capacitance	VDS=-10V, VGS=0V, f=1MHz	--	2995	--	pF
Coss	Output Capacitance		--	330	--	pF
CRSS	Reverse Transfer Capacitance		--	270	--	pF
Switching Characteristics						
Qg	Total Gate Charge	VDS=-10V, ID=-20A, VGS=-10V	--	73	--	nC
Qgs	Gate Source Charge		--	6.5	--	nC
Qgd	Gate Drain Charge		--	10	--	nC
td(on)	Turn-on Delay Time	VDD=-10V, ID=-20A, VGS=-10V, RG=3Ω	--	7	--	nS
tr	Turn-on Rise Time		--	33	--	nS
td(off)	Turn-Off Delay Time		--	130	--	nS
tf	Turn-Off Fall Time		--	135	--	nS
Source- Drain Diode Characteristics						
VSD	Forward on voltage	TJ=25°C, IS=-10A	--	-0.8	-1.2	V

Typical Operating Characteristics



PDFN3X3-8L Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.750	0.850	0.030	0.034
A1	0.152 REF.		0.006 REF.	
A2	0~0.05		0~0.002	
D	3.050	3.150	0.121	0.125
D1	0.985	1.085	0.039	0.043
D2	0.330	0.430	0.013	0.017
E	2.950	3.050	0.117	0.121
E1	3.250	3.350	0.129	0.132
E2	1.685	1.785	0.067	0.071
b	0.250	0.350	0.010	0.014
e	0.600	0.700	0.024	0.028
L	0.350	0.450	0.014	0.018
L1	0.280	0.380	0.011	0.015
L2	0~0.100		0~0.004	
L3	0~0.100		0~0.004	
H	0.350	0.450	0.014	0.018
θ	9°	13°	10°	12°