

### Features

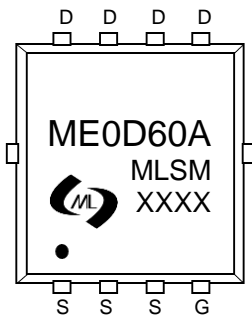
- High density cell design for ultra low  $R_{DS(ON)}$
- Fully characterized avalanche voltage and current
- Excellent package for good heat dissipation

### Product Summary

$V_{DS}$	$R_{DS(ON)}$ TYP	$I_D$
30V	4.2m $\Omega$ @10V	60A
	6.1m $\Omega$ @4.5V	

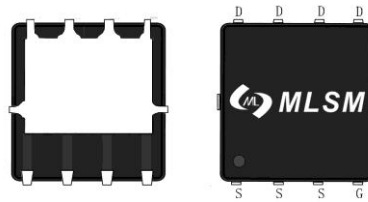
### Application

- Power switching application

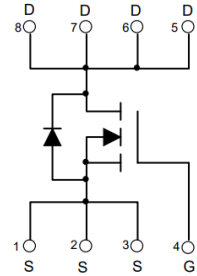


ME0D60A: Device code  
 XXXX: Code

Marking and pin assignment



PDFN3X3-8L view



Schematic diagram



Pb-Free



RoHS



Halogen-Free

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

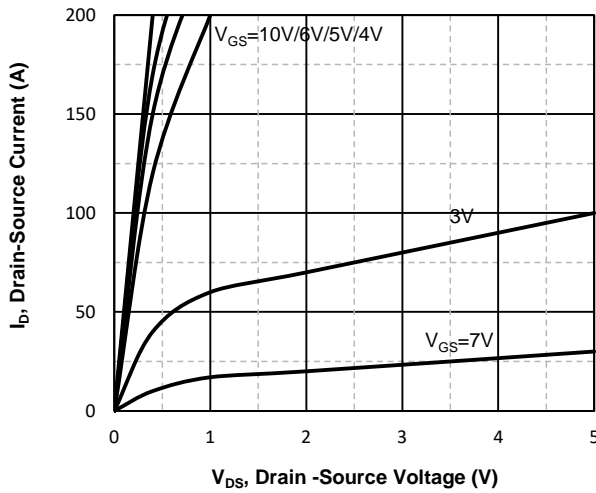
Symbol	Parameter	Rating	Unit
<b>Common Ratings (TC=25°C Unless Otherwise Noted)</b>			
$V_{DS}$	Drain-Source Breakdown Voltage	30	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$T_J$	Maximum Junction Temperature	150	°C
$T_{STG}$	Storage Temperature Range	-50 to 155	°C
$I_S$	Diode Continuous Forward Current	$T_C=25^\circ\text{C}$ 60	A
<b>Mounted on Large Heat Sink</b>			
$I_{DM}$	Pulse Drain Current Tested	$T_C=25^\circ\text{C}$ 240	A
$I_D$	Continuous Drain Current	$T_C=25^\circ\text{C}$ 60	A
$P_D$	Maximum Power Dissipation	$T_C=25^\circ\text{C}$ 75	W
$R_{\theta JA}$	Thermal Resistance Junction-Ambient	60	°C/W

### Ordering Information (Example)

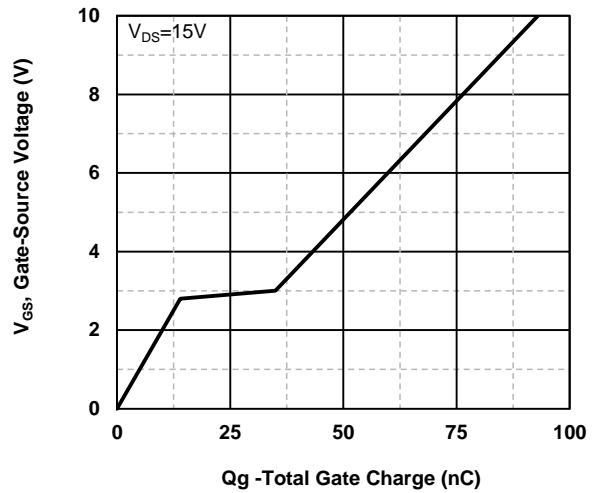
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
ME0D60A	PDFN3X3-8L	ME0D60A	5,000	10,000	70,000	13"reel

Electrical Characteristics (T <sub>J</sub> =25 °C unless otherwise noted)						
Symbol	Parameter	Condition	Min	Typ	Max	Unit
<b>Static Electrical Characteristics @ T<sub>J</sub> = 25 °C (unless otherwise stated)</b>						
BV <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V, I <sub>D</sub> =250μA	30	--	--	V
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> =30V, V <sub>GS</sub> =0V	--	--	1	μA
I <sub>GSS</sub>	Gate-Body Leakage Current	V <sub>GS</sub> =±20V, V <sub>DS</sub> =0V	--	--	±100	nA
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250μA	1.0	1.5	2.5	V
R <sub>DS(on)</sub>	Drain-Source On-State Resistance	V <sub>GS</sub> =10V, I <sub>D</sub> =20A	--	4.2	5.5	mΩ
		V <sub>GS</sub> =4.5V, I <sub>D</sub> =15A	--	6.1	8.0	mΩ
<b>Dynamic Electrical Characteristics @ T<sub>J</sub> = 25 °C (unless otherwise stated)</b>						
C <sub>ISS</sub>	Input Capacitance	V <sub>DS</sub> =15V, V <sub>GS</sub> =0V, f=1MHz	--	4498	--	pF
C <sub>OSS</sub>	Output Capacitance		--	800	--	pF
C <sub>RSS</sub>	Reverse Transfer Capacitance		--	643	--	pF
<b>Switching Characteristics</b>						
Q <sub>g</sub>	Total Gate Charge	V <sub>DD</sub> =15V, I <sub>D</sub> =20A, V <sub>GS</sub> =10V	--	92.7	--	nC
Q <sub>gs</sub>	Gate Source Charge		--	13.5	--	nC
Q <sub>gd</sub>	Gate Drain Charge		--	22.8	--	nC
t <sub>d(on)</sub>	Turn-on Delay Time	V <sub>DD</sub> =20V, I <sub>D</sub> =20A, V <sub>GS</sub> =10V, R <sub>G</sub> =3Ω	--	11	--	nS
t <sub>r</sub>	Turn-on Rise Time		--	80	--	nS
t <sub>d(off)</sub>	Turn-Off Delay Time		--	39	--	nS
t <sub>f</sub>	Turn-Off Fall Time		--	92	--	nS
<b>Source- Drain Diode Characteristics</b>						
V <sub>SD</sub>	Forward on voltage	T <sub>J</sub> =25 °C, I <sub>S</sub> =20A	--	--	1.2	V

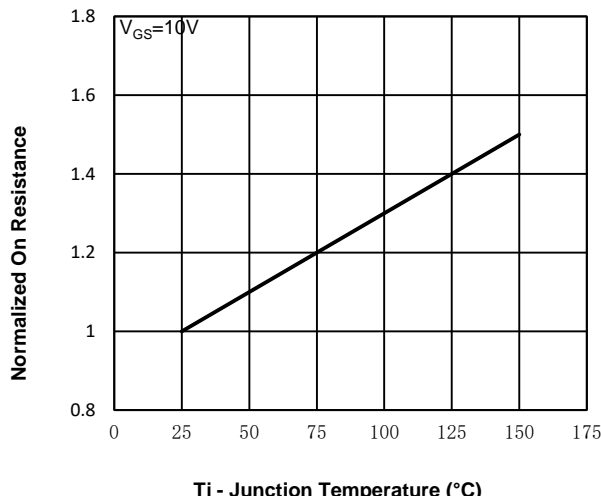
**Typical Operating Characteristics**



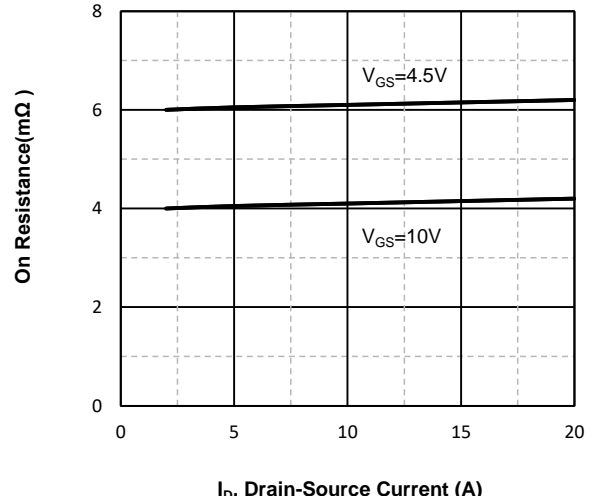
**Fig1. Typical Output Characteristics**



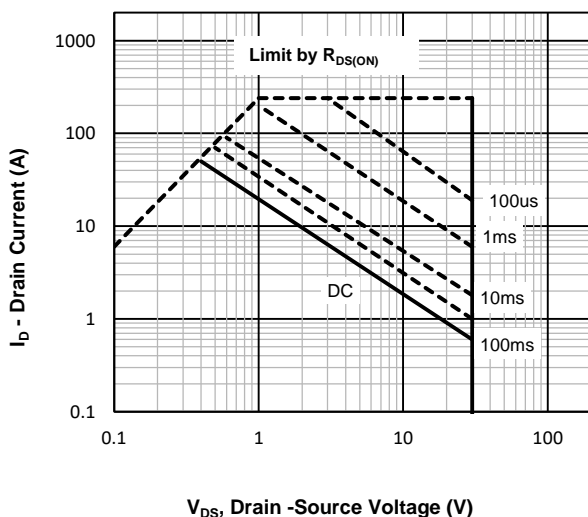
**Fig2. Typical Gate Charge Vs. Gate-Source Voltage**



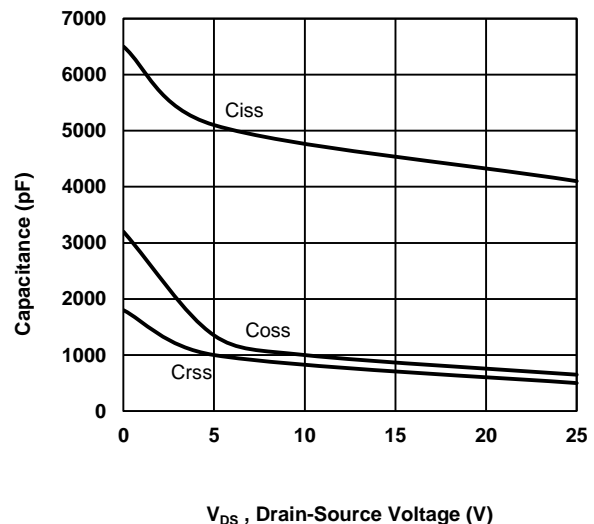
**Fig3. Normalized On-Resistance Vs. Temperature**



**Fig4. On-Resistance Vs. Drain-Source Current**

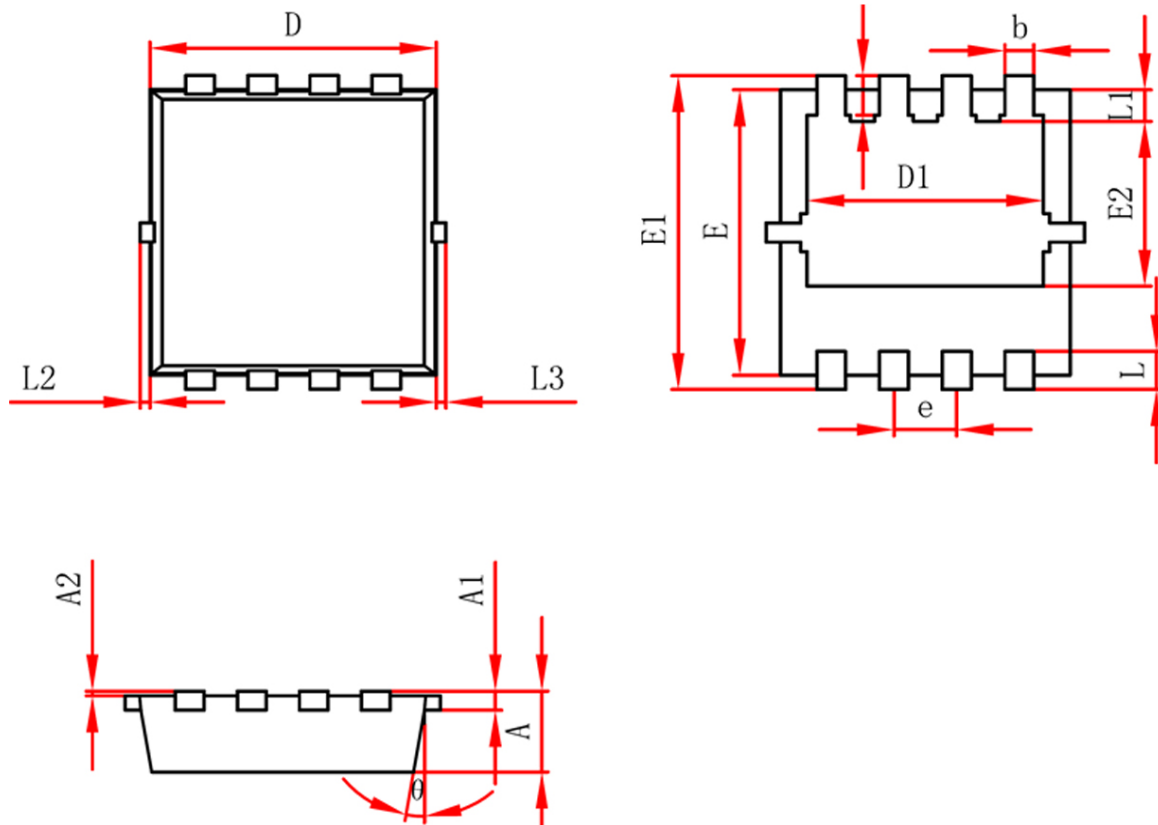


**Fig5. Maximum Safe Operating Area**



**Fig6. Typical Capacitance Vs. Drain-Source Voltage**

## 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	2.950	3.150	0.117	0.125
D1	2.400	2.500	0.095	0.099
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	0.325	0.425	0.013	0.017
L2	0~0.100		0~0.004	
L3	0~0.100		0~0.004	
H	0.365	0.465	0.014	0.018
θ	10°	12°	10°	12°