

Features

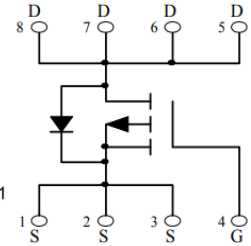
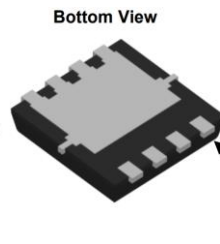
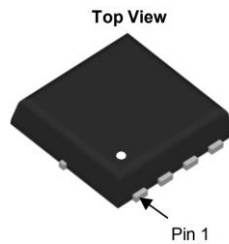
- High density cell design for ultra low $R_{DS(ON)}$
- Fully characterized avalanche voltage and current
- Good stability and uniformity with high E_{AS}

-30V/-35A P-Channel MOSFET Product Summary

V_{DS}	$R_{DS(ON)}$ MAX	I_D MAX
-30V	10.5mΩ@20V	-35A
	12.5mΩ@10V	

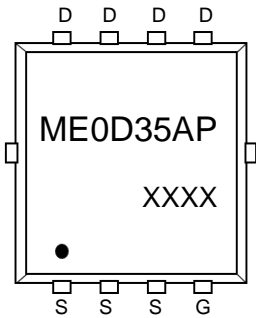
Application

- Battery and loading switching
- Excellent package for good heat dissipation



PDFN3X3-8L

Schematic diagram



ME0D35AP : Device code
XXXX : Code

Marking and pin assignment

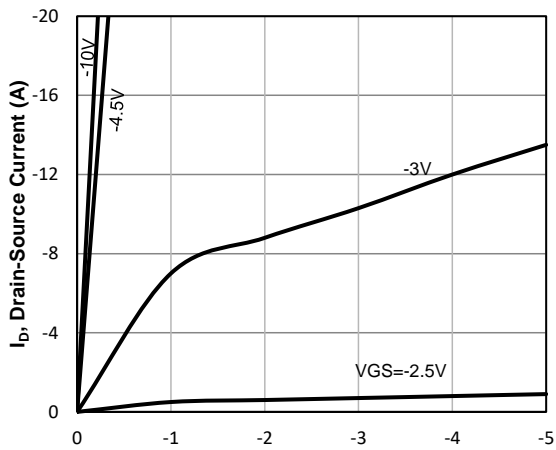


Halogen-Free

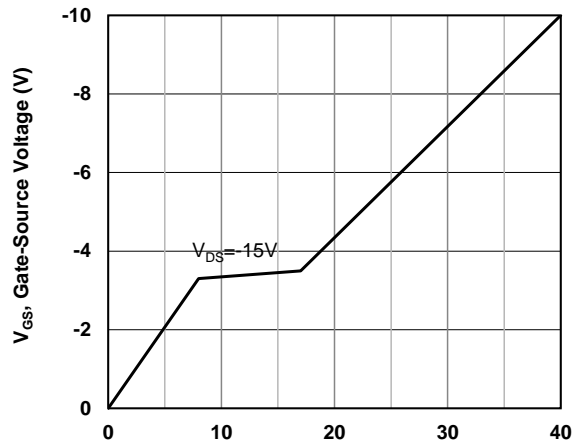
Absolute Maximum Ratings (TA=25°C unless otherwise noted)				
Symbol	Parameter		Rating	Unit
Common Ratings (TC=25°C Unless Otherwise Noted)				
V_{DS}	Drain-Source Breakdown Voltage		-30	V
V_{GS}	Gate-Source Voltage		±25	V
E_{AS}	Single pulse avalanche energy		105	mJ
T_J, T_{STG}	Storage Temperature Range		-55 to 150	°C
I_S	Diode Continuous Forward Current	$T_C=25^\circ\text{C}$	-35	A
Mounted on Large Heat Sink				
I_{DM}	Pulse Drain Current Tested	$T_C=25^\circ\text{C}$	-160	A
I_D	Continuous Drain Current	$T_C=25^\circ\text{C}$	-35	A
P_D	Maximum Power Dissipation	$T_C=25^\circ\text{C}$	35	W
$R_{\theta JA}$	Thermal Resistance Junction-Ambient		83	°C/W

Electrical Characteristics (T _J =25°C unless otherwise noted)						
Symbol	Parameter	Condition	Min	Typ	Max	Unit
Static Electrical Characteristics @ T_J = 25°C (unless otherwise stated)						
BV _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =-250μA	-30	--	--	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =-25V, V _{GS} =0V	--	--	-1	μA
I _{GSS}	Gate-Body Leakage Current	V _{GS} =±25V, V _{DS} =0V	--	--	±100	nA
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =-250μA	-1.2	-1.7	-2.8	V
R _{DS(on)}	Drain-Source On-State Resistance	V _{GS} =-20V, I _D =-12A	--	7	10.5	mΩ
		V _{GS} =-10V, I _D =-10A	--	9.5	12.5	mΩ
		V _{GS} =-4.5V, I _D =-8A	--	13.8	20.8	mΩ
Dynamic Electrical Characteristics @ T_J = 25°C (unless otherwise stated)						
C _{ISS}	Input Capacitance	V _{DS} =-15V, V _{GS} =0V, f=1MHz	--	2150	--	pF
C _{OSS}	Output Capacitance		--	310	--	pF
C _{RSS}	Reverse Transfer Capacitance		--	245	--	pF
Switching Characteristics						
Q _g	Total Gate Charge	V _{DD} =-15V, I _D =-12A, V _{GS} =-10V	--	40.3	--	nC
Q _{gs}	Gate Source Charge		--	8.5	--	nC
Q _{gd}	Gate Drain Charge		--	8.8	--	nC
t _{d(on)}	Turn-on Delay Time	V _{DD} =-15V, I _D =-1A, V _{GS} =-10V, R _G =2.5Ω	--	8.3	--	nS
t _r	Turn-on Rise Time		--	19.2	--	nS
t _{d(off)}	Turn-Off Delay Time		--	75	--	nS
t _f	Turn-Off Fall Time		--	45	--	nS
Source- Drain Diode Characteristics						
V _{SD}	Forward on voltage	T _J =25°C, I _S =-12A,	--	--	-1.2	V

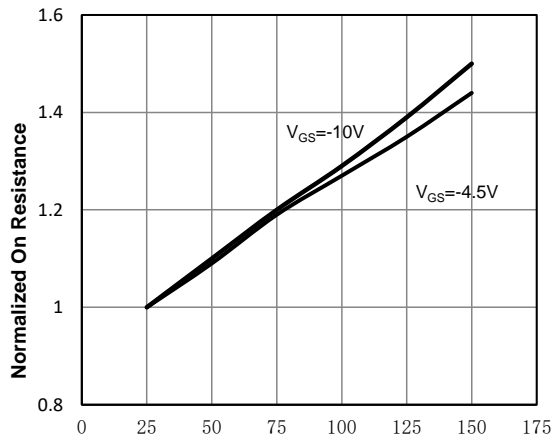
Typical Operating Characteristics



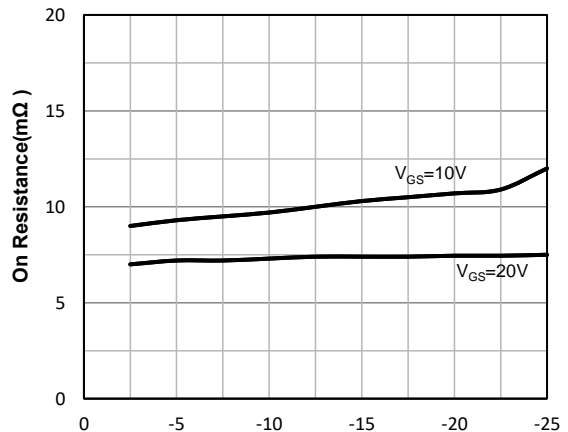
V_{DS} , Drain -Source Voltage (V)
Fig1. Typical Output Characteristics



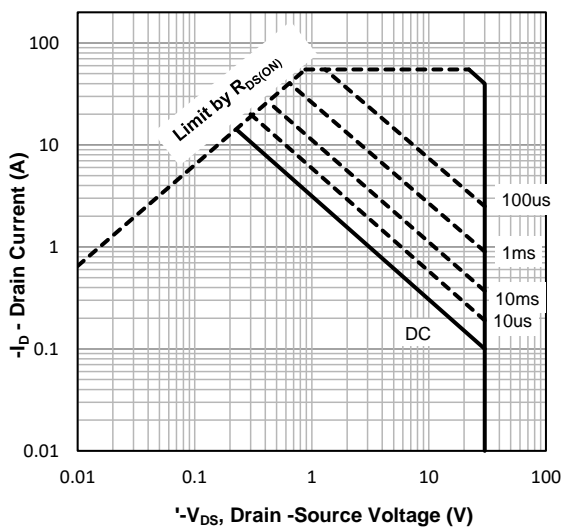
Q_g -Total Gate Charge (nC)
Fig2. Typical Gate Charge Vs. Gate-Source Voltage



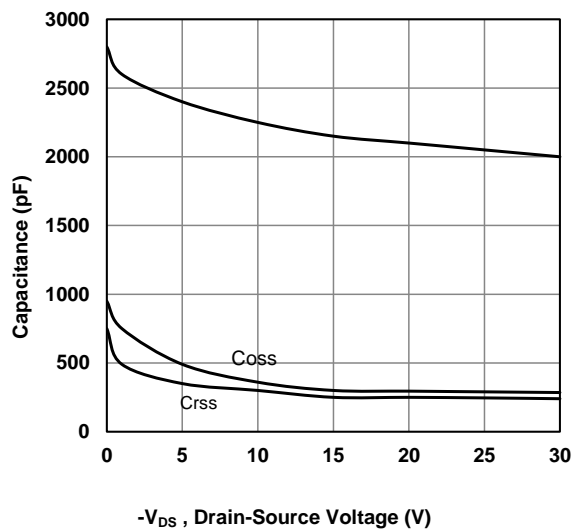
T_j - Junction Temperature ($^{\circ}C$)
Fig3. Normalized On-Resistance Vs. Temperature



I_D , Drain-Source Current (A)
Fig4. On-Resistance Vs. Drain-Source Current



$-V_{DS}$, Drain -Source Voltage (V)
Fig5. Maximum Safe Operating Area



$-V_{DS}$, Drain-Source Voltage (V)
Fig6 Typical Capacitance Vs. Drain-Source Voltage

