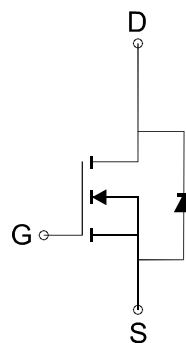
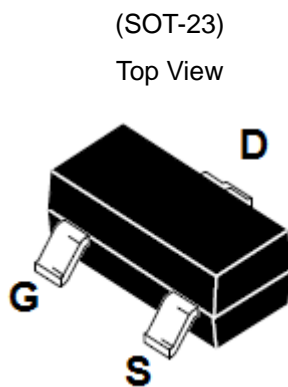


#### GENERAL DESCRIPTION

The MEE2348A-G is a N-Channel enhancement mode power field effect transistor, using Force-MOS patented Extended Trench Gate(ETG) technology. This advanced technology is especially tailored to minimize on state resistance and gate charge, and enhance avalanche capability. These devices are particularly suited for medium voltage application such as charger, adapter, notebook computer power management and other lighting dimming powered circuits, and low in-line power loss that are needed in a very small outline surface mount package.

#### PIN CONFIGURATION



N-Channel MOSFET

Ordering Information: MEE2348A (Green product)

MEE2348A-G (Green product-Halogen free)

#### Absolute Maximum Ratings (T<sub>c</sub>=25°C Unless Otherwise Noted)

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	V <sub>DS</sub>	100	V
Gate-Source Voltage	V <sub>GS</sub>	±20	V
Continuous Drain Current	I <sub>D</sub>	T <sub>A</sub> =25°C	2.34
		T <sub>A</sub> =70°C	1.87
Pulsed Drain Current	I <sub>DM</sub>	7.3	A
Maximum Power Dissipation	P <sub>D</sub>	T <sub>A</sub> =25°C	1.14
		T <sub>A</sub> =70°C	0.73
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	-55 to 150	°C
Thermal Resistance-Junction to Ambient*	R <sub>θJA</sub>	110	°C/W

\* The device mounted on 1in<sup>2</sup> FR4 board with 2 oz copper

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**Electrical Characteristics** (T<sub>c</sub> =25°C Unless Otherwise Specified)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
<b>STATIC</b>						
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V, I <sub>D</sub> =250μA	100			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250μA	1		3	V
I <sub>GSS</sub>	Gate Leakage Current	V <sub>DS</sub> =0V, V <sub>GS</sub> =±20V			±100	nA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> =100V, V <sub>GS</sub> =0V			1	μA
R <sub>DS(ON)</sub>	Drain-Source On-Resistance <sup>a</sup>	V <sub>GS</sub> =10V, I <sub>D</sub> = 2A		100	130	mΩ
		V <sub>GS</sub> =5V, I <sub>D</sub> = 1A		135	205	mΩ
V <sub>SD</sub>	Diode Forward Voltage	I <sub>S</sub> =1A, V <sub>GS</sub> =0V		0.9	1.2	V
<b>DYNAMIC</b>						
Q <sub>g</sub>	Total Gate Charge	V <sub>DS</sub> =50V, V <sub>GS</sub> =10V, I <sub>D</sub> =2A		15.5		nC
Q <sub>gs</sub>	Gate-Source Charge			2.6		
Q <sub>gd</sub>	Gate-Drain Charge			3.6		
C <sub>iss</sub>	Input Capacitance	V <sub>DS</sub> =15V, V <sub>GS</sub> =0V, f=1MHz		314		pF
C <sub>oss</sub>	Output Capacitance			119		
C <sub>rss</sub>	Reverse Transfer Capacitance			15		
t <sub>d(on)</sub>	Turn-On Delay Time	V <sub>DS</sub> =50V, R <sub>L</sub> =50Ω, V <sub>GS</sub> =10V, R <sub>G</sub> =1Ω I <sub>D</sub> =1A		8.4		ns
t <sub>r</sub>	Turn-On Rise Time			24.8		
t <sub>d(off)</sub>	Turn-Off Delay Time			30.7		
t <sub>f</sub>	Turn-Off Fall Time			2.5		

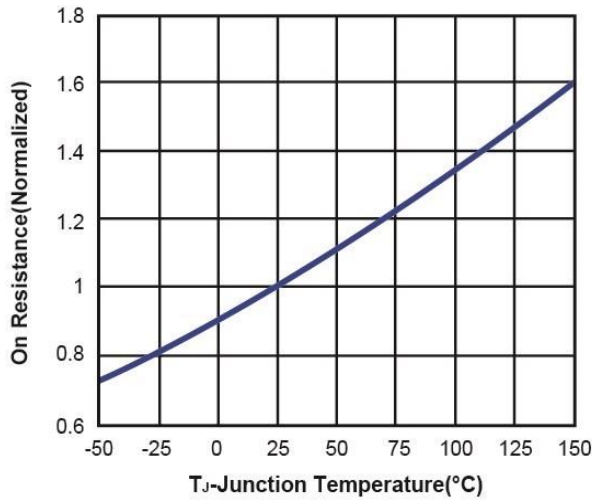
Notes: a. Pulse test: pulse width ≤ 300us, duty cycle ≤ 2%, Guaranteed by design, not subject to production testing.

b. Force mos reserves the right to improve or change product design, functions, reliability, qualified manufacturer without notice.

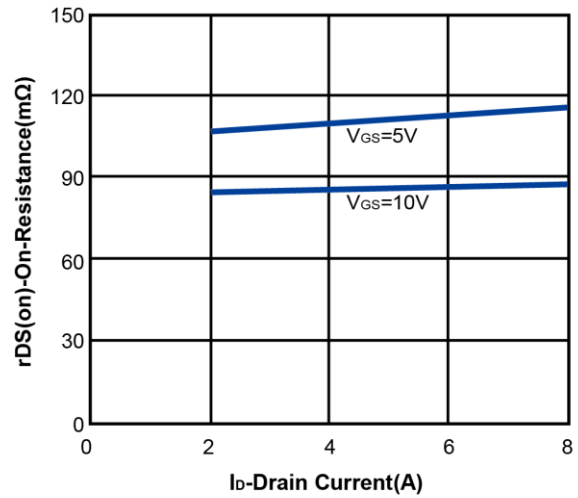


#### Typical Characteristics (T<sub>J</sub> = 25°C Noted)

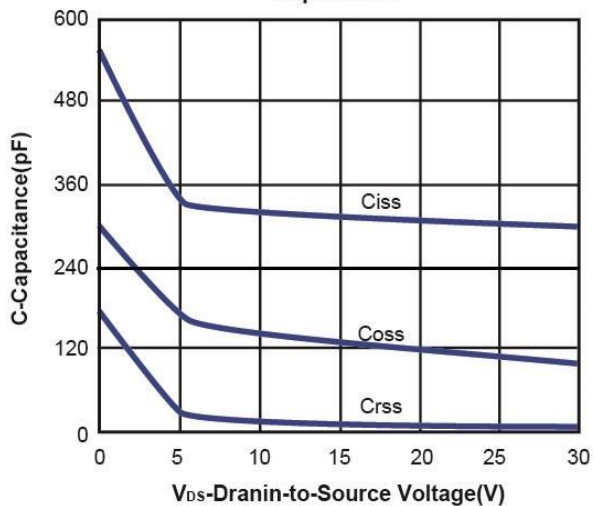
On Resistance vs. Junction Temperature



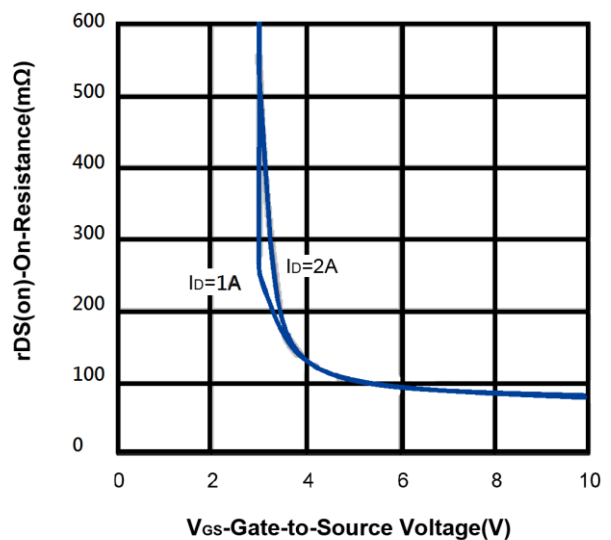
On Resistance vs. Drain Current



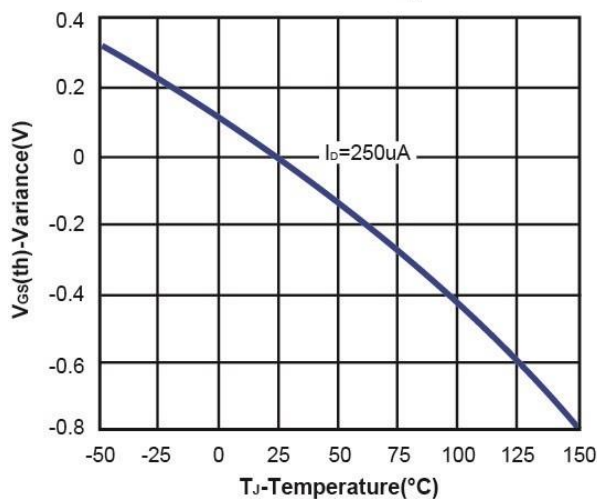
Capacitance



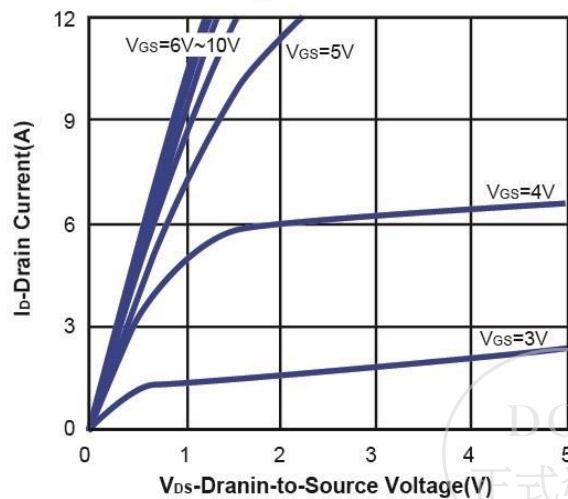
On Resistance vs. Gate-to-Source Voltage



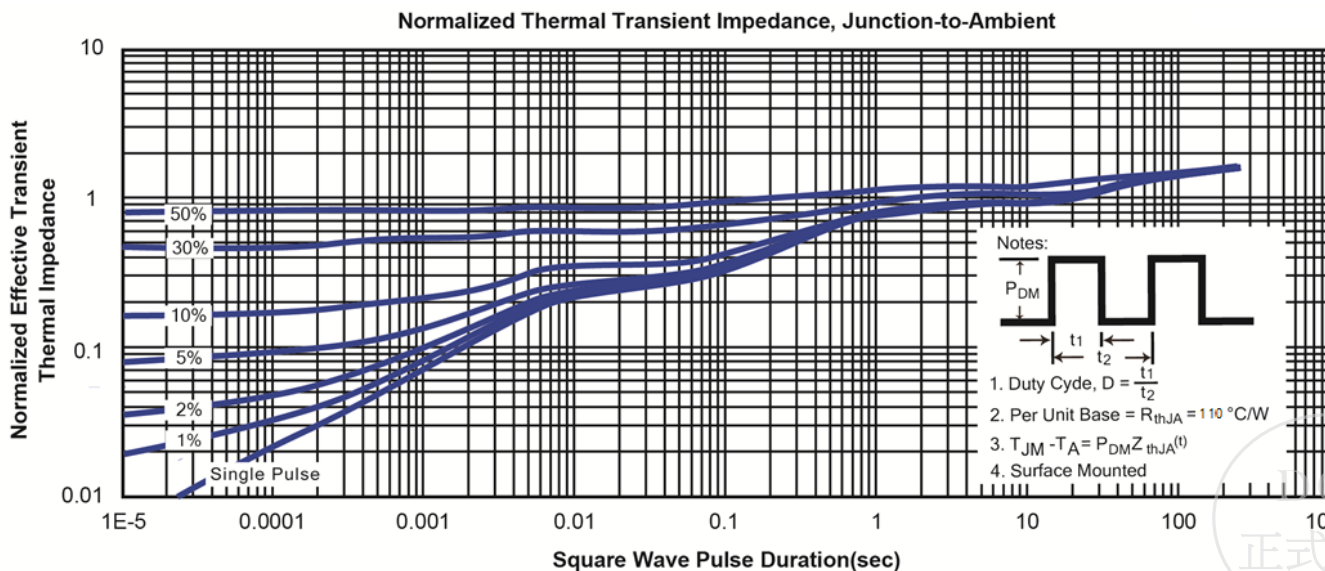
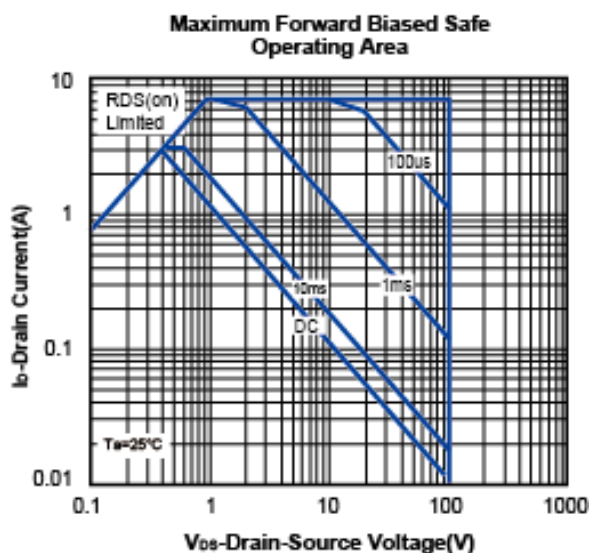
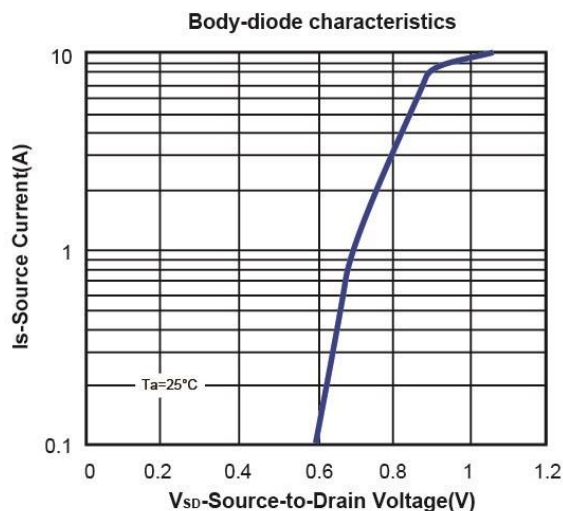
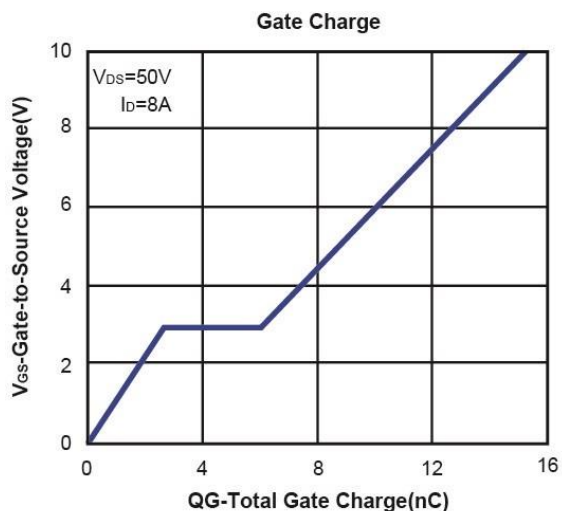
Threshold Voltage



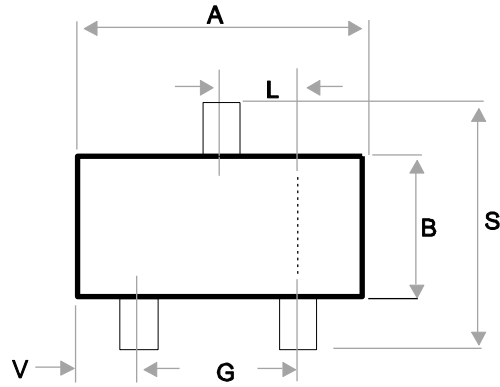
On-Region Characteristics



Typical Characteristics (T<sub>J</sub> = 25°C Noted)



### SOT-23 Package Outline



Symbol	MILLIMETERS (mm)	
	MIN	MAX
A	2.8	3.05
B	1.5	1.75
C	0.9	1.3
D	0.35	0.5
G	1.8	2
H	0	0.15
J	0.1	0.2
K	0.35	0.6
L	0.85	1.05
S	2.6	3
V	0.375	0.675

