

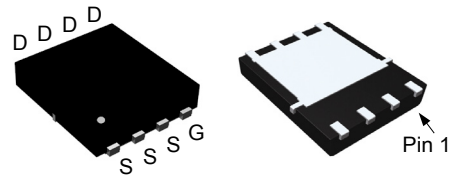
Features

- -20V/-90A
 $R_{DS(ON)}=5m\Omega(\text{typ.})@V_{GS}=-4.5V$
 $R_{DS(ON)}=6m\Omega(\text{typ.})@V_{GS}=-2.5V$
- 100% UIS + R_g Tested
- Reliable and Rugged
- Lead Free and Green Devices Available (RoHS Compliant)

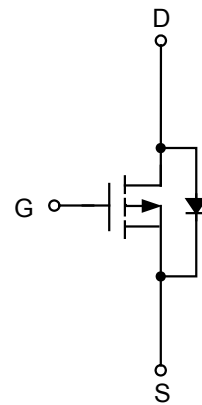
Applications

- Portable Equipment applications
- For E-cigarette battery protection application
- Load switch

Pin Description



DFN5x6A-8_EP



P-Channel MOSFET

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ Unless Otherwise Noted)

Symbol	Parameter		Rating	Unit
Common Ratings				
V _{DSS}	Drain-Source Voltage		-20	V
V _{GSS}	Gate-Source Voltage		±12	
T _J	Maximum Junction Temperature		150	°C
T _{STG}	Storage Temperature Range		-55 to 150	
I _S	Diode Continuous Forward Current	T _C =25°C	-90	A
I _D	Continuous Drain Current	T _C =25°C	-90	A
		T _C =100°C	-68	
I _{DM} ^a	Pulsed Drain Current	T _C =25°C	-270	
P _D	Maximum Power Dissipation	T _C =25°C	36.7	W
		T _C =100°C	14.7	
R _{θJC}	Thermal Resistance-Junction to Case	Steady state	3.4	°C/W
R _{θJA} ^b	Thermal Resistance-Junction to Ambient	Steady state	60	°C/W
I _{AS} ^c	Avalanche Current, Single pulse	L=0.5mH	-18	A
E _{AS} ^c	Avalanche Energy, Single pulse	L=0.5mH	81	mJ

Note a : Pulse width limited by max. junction temperature.

Note b : Surface Mounted on 1in^2 pad area.

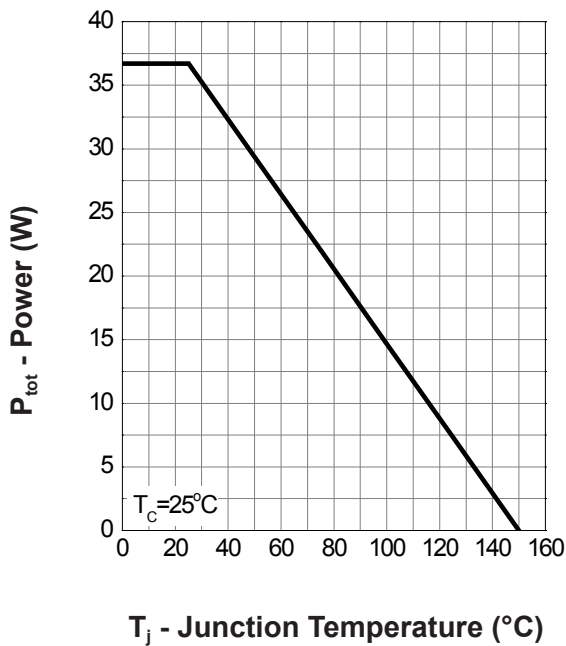
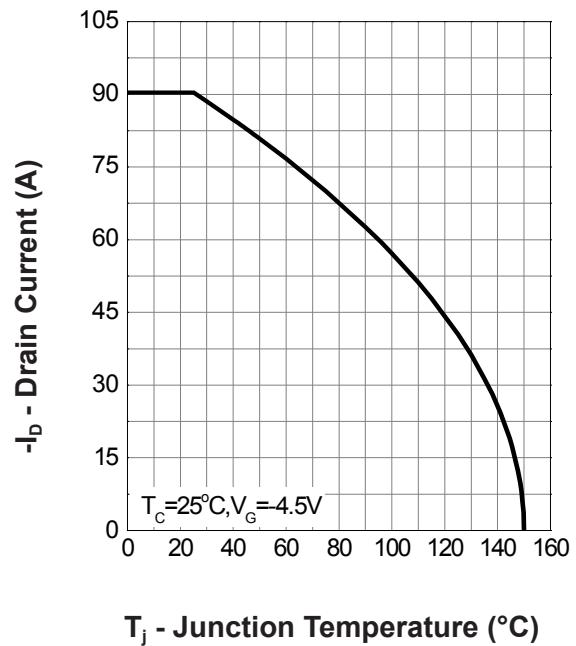
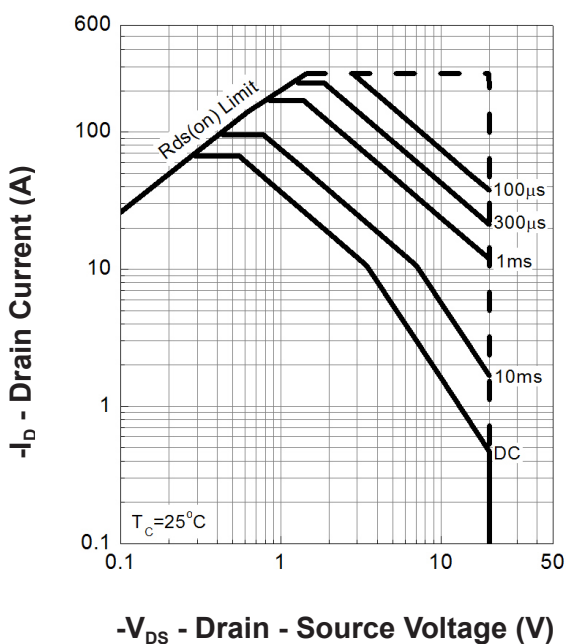
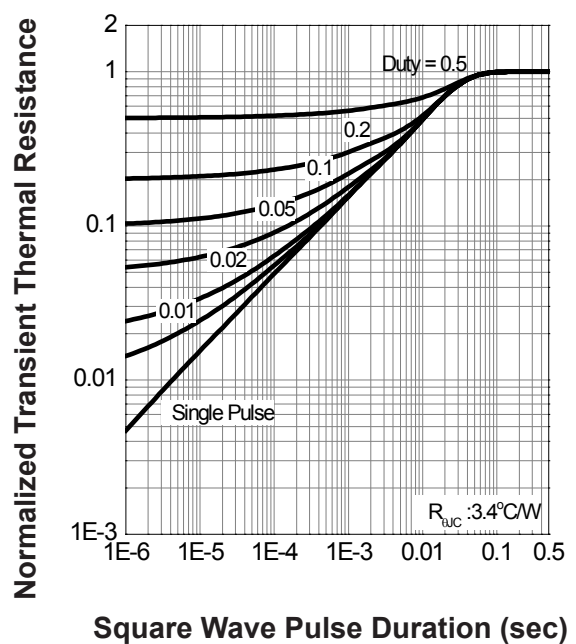
Note c : UIS tested and pulse width limited by maximum junction temperature 150°C (initial temperature $T_J=25^{\circ}\text{C}$).

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

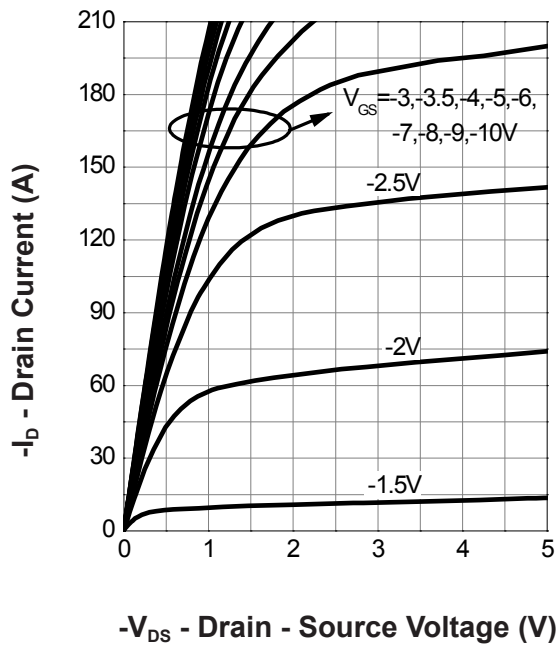
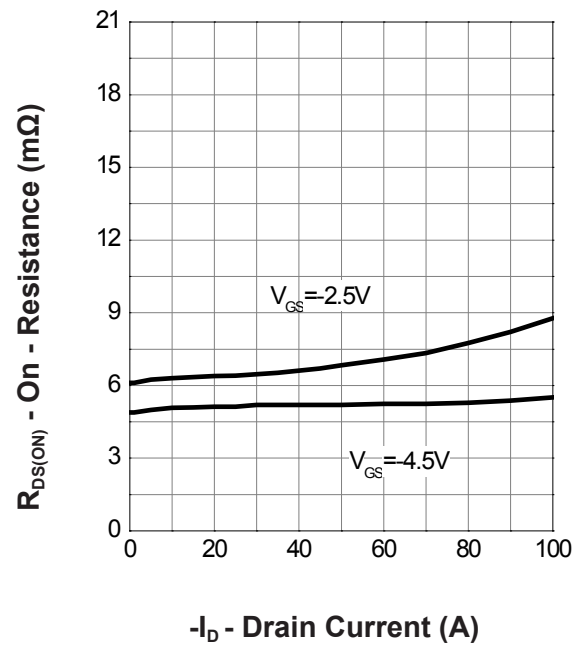
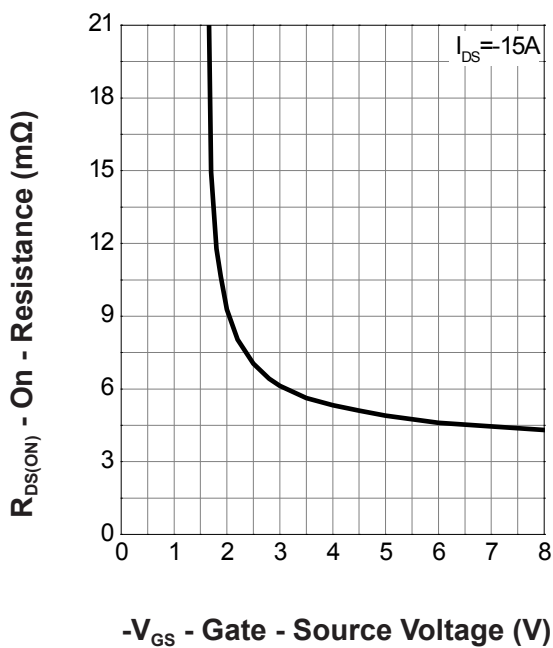
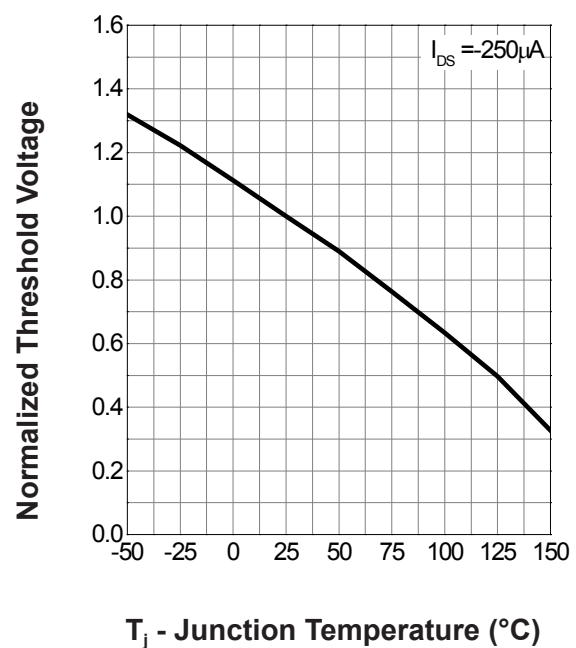
Note d : Pulse test ; pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.

Note e : Guaranteed by design, not subject to production testing.nd on package type.

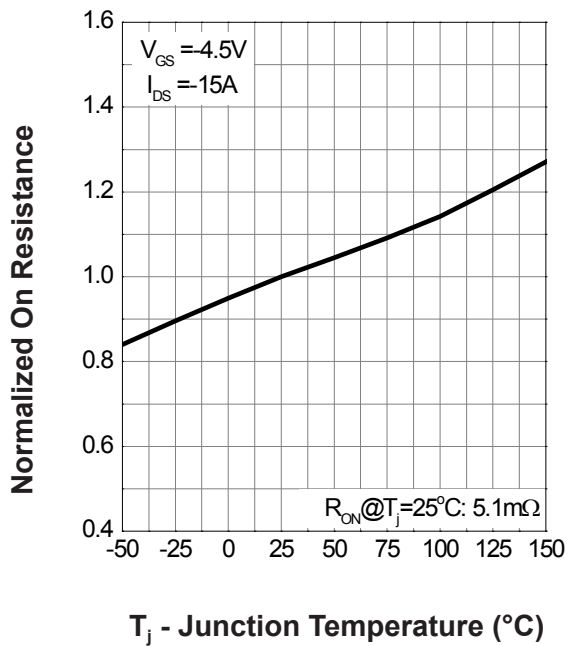
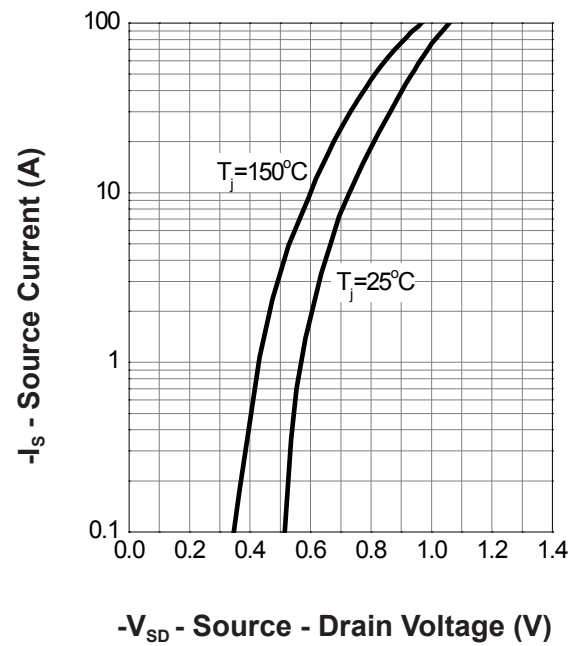
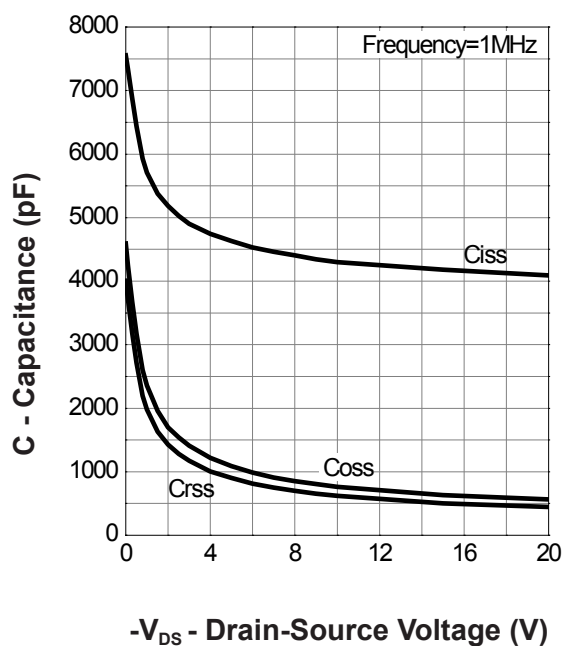
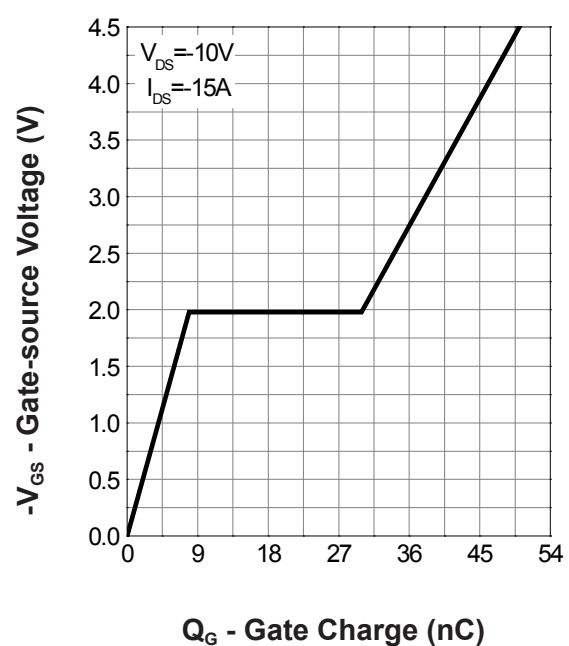
Typical Operating Characteristics

Power Dissipation

Drain Current

Safe Operation Area

Thermal Transient Impedance


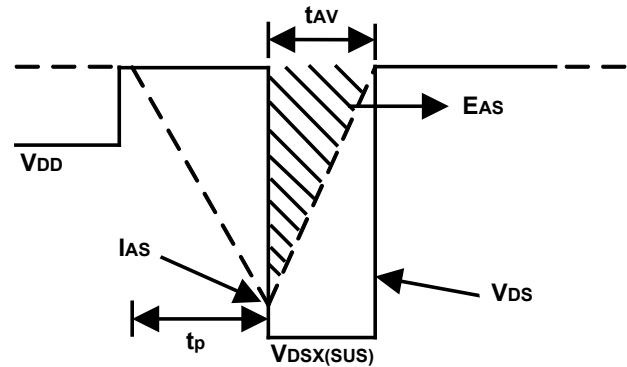
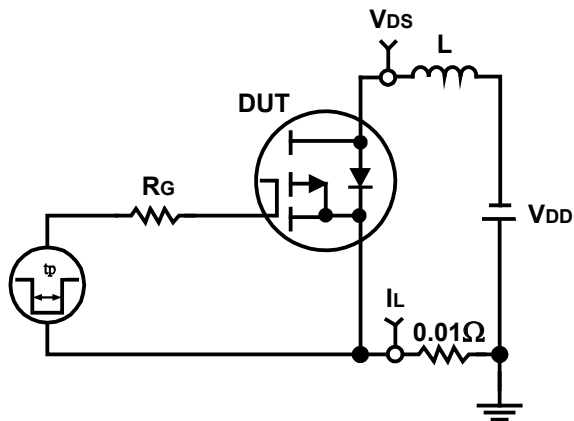
Typical Operating Characteristics(Cont.)

Output Characteristics

Drain-Source On Resistance

Gate-Source On Resistance

Gate Threshold Voltage


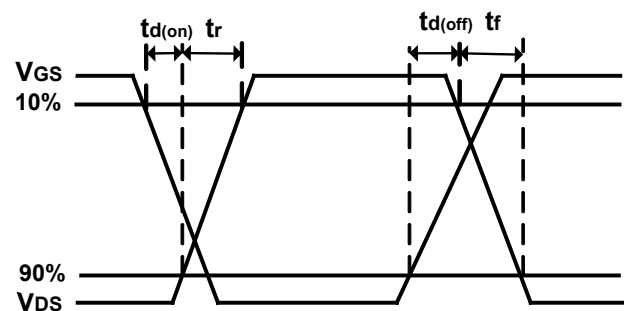
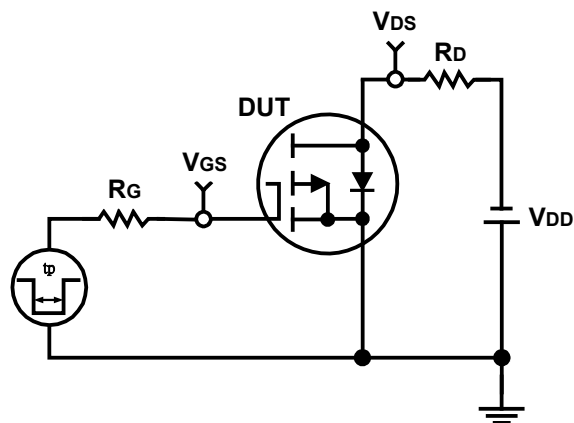
Typical Operating Characteristics(Cont.)

Drain-Source On Resistance

Source-Drain Diode Forward

Capacitance

Gate Charge


Avalanche Test Circuit and Waveforms

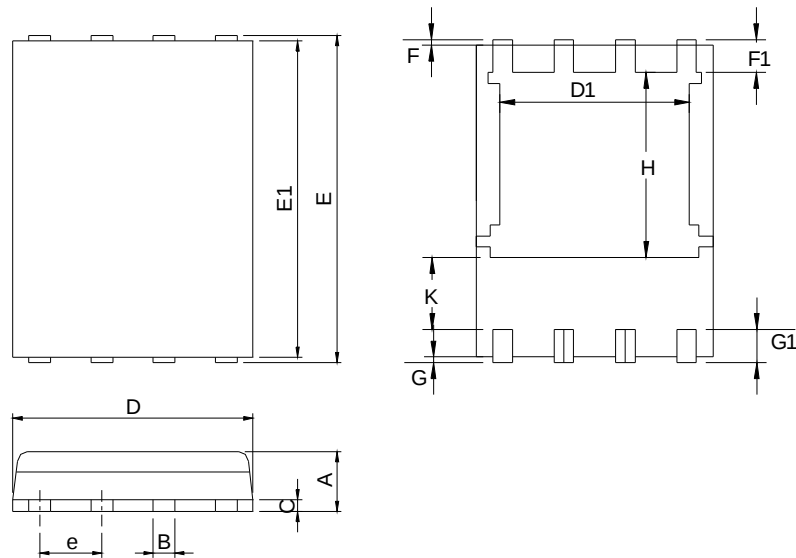


Switching Time Test Circuit and Waveforms



Package Information

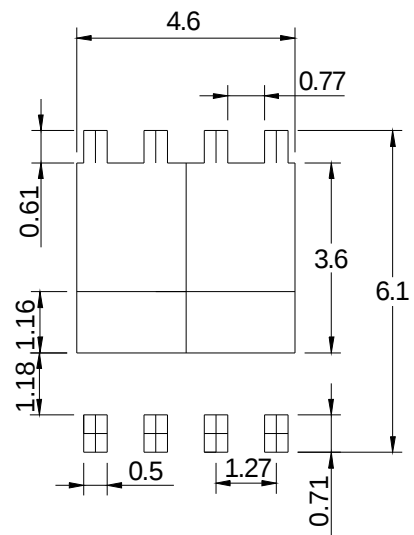
DFN5x6-8



SYMBOL	DFN5x6-8			
	MILLIMETERS		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	0.90	1.20	0.035	0.047
B	0.3	0.51	0.012	0.020
C	0.19	0.25	0.007	0.010
D	4.80	5.30	0.189	0.209
D1	4.00	4.40	0.157	0.173
E	5.90	6.20	0.232	0.244
E1	5.50	5.80	0.217	0.228
e	1.27 BSC		0.050 BSC	
F	0.05	0.30	0.002	0.012
F1	0.35	0.75	0.014	0.030
G	0.05	0.30	0.002	0.012
G1	0.35	0.75	0.014	0.030
H	3.34	3.9	0.131	0.154
K	0.762	-	0.03	-

Note : 1.Dimension D, D1,D2 and E1 do not include mold flash or protrusions.
Mold flash or protrusions shall not exceed 10 mil.

RECOMMENDED LAND PATTERN



UNIT: mm