

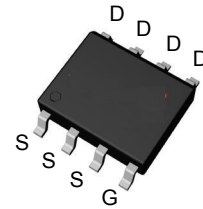
P-Channl Enhancement Mode MOSFET

- -30V/-10A
- $R_{DS(ON)}=14m\Omega$ (typ) @VGS=-10V
 $R_{DS(ON)}=20m\Omega$ (typ) @VGS=-4.5V
- 100% UIS & RG Tested
- Reliableand Rugged
- Lead Freeand Green Devices Available
(RoHS Compliant)

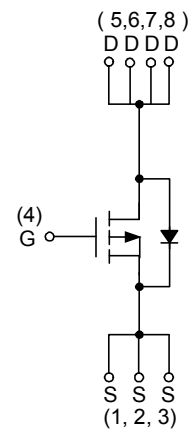
Applications

- Power Management for Industrial DC/DC Converters

Pin Description



Top View of SOP-8



P-Channel MOSFET

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

Symbol	Parameter		Rating	Unit
Common Ratings				
V _{DSS}	Drain-Source Voltage		-30	V
V _{GSS}	Gate-Source Voltage		±25	
I _D	Continuous Drain Current (T _J =150°C)		-10	A
I _{DM}			-30	
I _S	Diode Continuous Forward Current	Tc=25°C	-10	A
T _{STG} , T _J	Storage Temperature Range		-55 to 150	°C
PD	Power Dissipation	T _A =25°C	2.8	W
		T _A =70°C	1.8	
R _{θJA}	Thermal Resistance-Junction to Ambient		62.5	°C/W

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress rating only and functional device operation is not implied

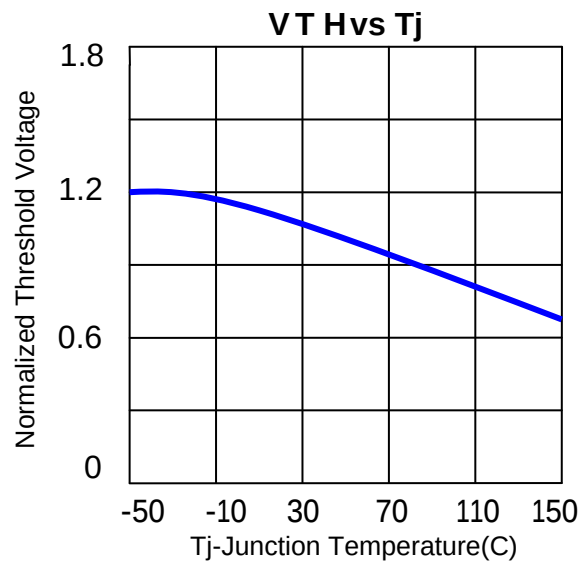
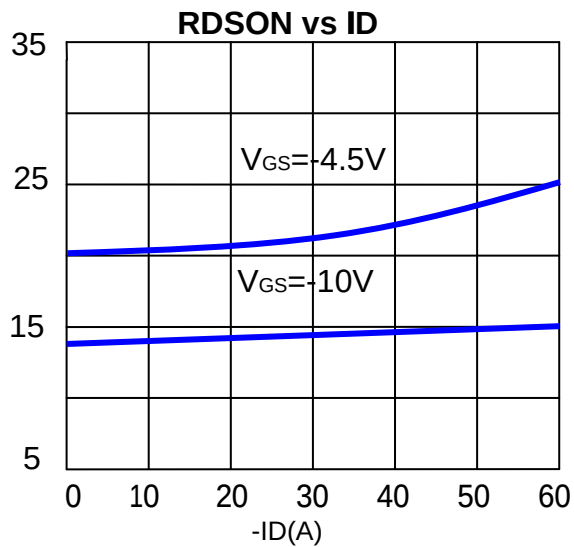
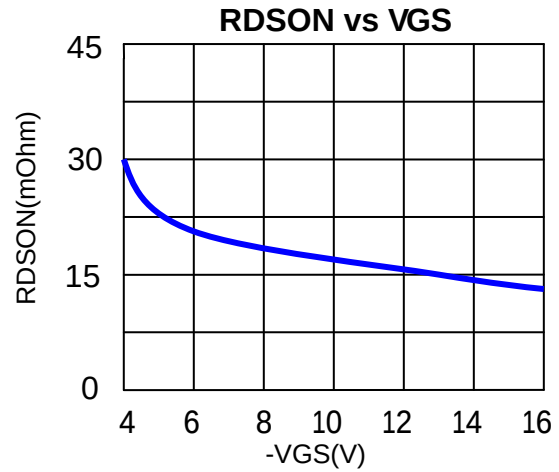
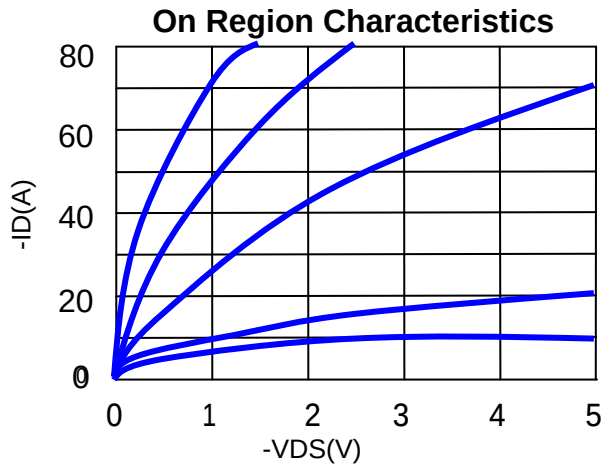
Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _{DS} =-250μA	-30	-	-	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =-24V, V _{GS} =0V	-	-	-1	μA
		T _J =85°C	-	-	-30	
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _{DS} =-250μA	-1	-	-2	V
I _{GSS}	Gate Leakage Current	V _{GS} =±25V, V _{DS} =0V	-	-	±100	nA
R _{DS(ON)}	Drain-Source On-state Resistance	V _{GS} =-10V, I _{DS} =-10A	-	14	18	mΩ
		V _{GS} =-4.5V, I _{DS} =-5A	-	20	25	
Body Diode Characteristics						
V _{SD}	Diode Forward Voltage	I _{SD} =-2A, V _{GS} =0V	-	-0.7	-1.3	V
Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{GS} =0V, V _{DS} =-25V, Frequency=1.0MHz	-	1020	-	pF
C _{oss}	Output Capacitance		-	110	-	
C _{rss}	Reverse transfer capacitance		-	90	-	
t _{d(ON)}	Turn-on delay Time	V _{GS} =-10V ,V _{DS} =-15V R _G =6Ω, I _D =1A,R _L =15Ω,	-	10.5	-	nS
t _r	Turn-on rise Time		-	11	-	
t _{d(OFF)}	Turn-off delay Time		-	51	-	
t _f	Turn-off rise Time		-	28	-	
Gate Charge Characteristics						
Q _g	Total Gate Charge	V _{DS} =-15V, V _{GS} =-10V, I _{DS} =-9A	-	11.6	-	nC
Q _{gs}	Gate-Source Charge		-	3.5	-	
Q _{gd}	Gate-Drain Charge		-	5.9	-	

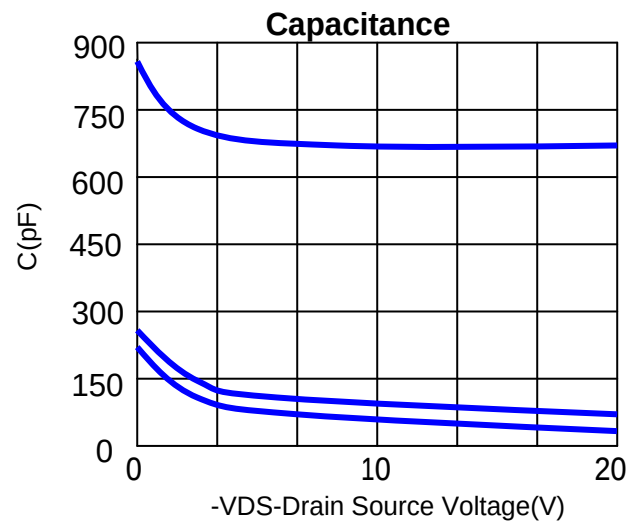
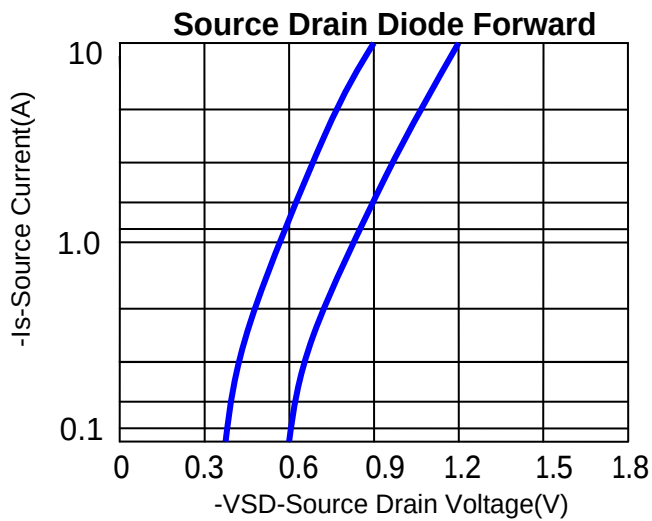
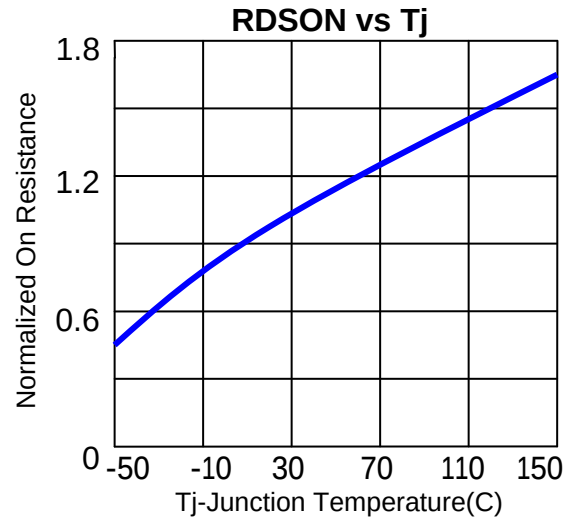
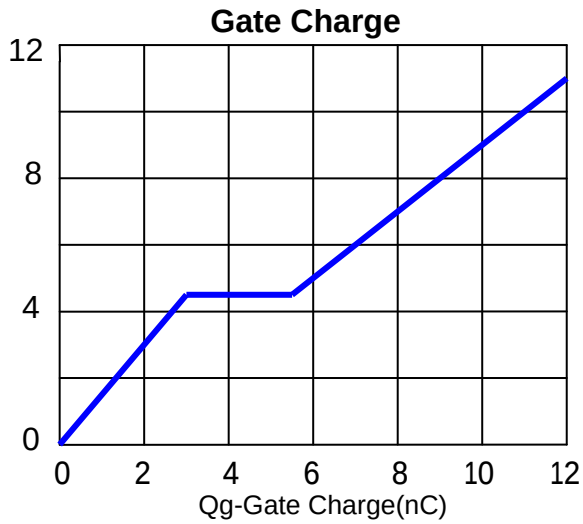
Note: 1. Pulse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$

2.Static parameters are based on package level with recommended wire bonding

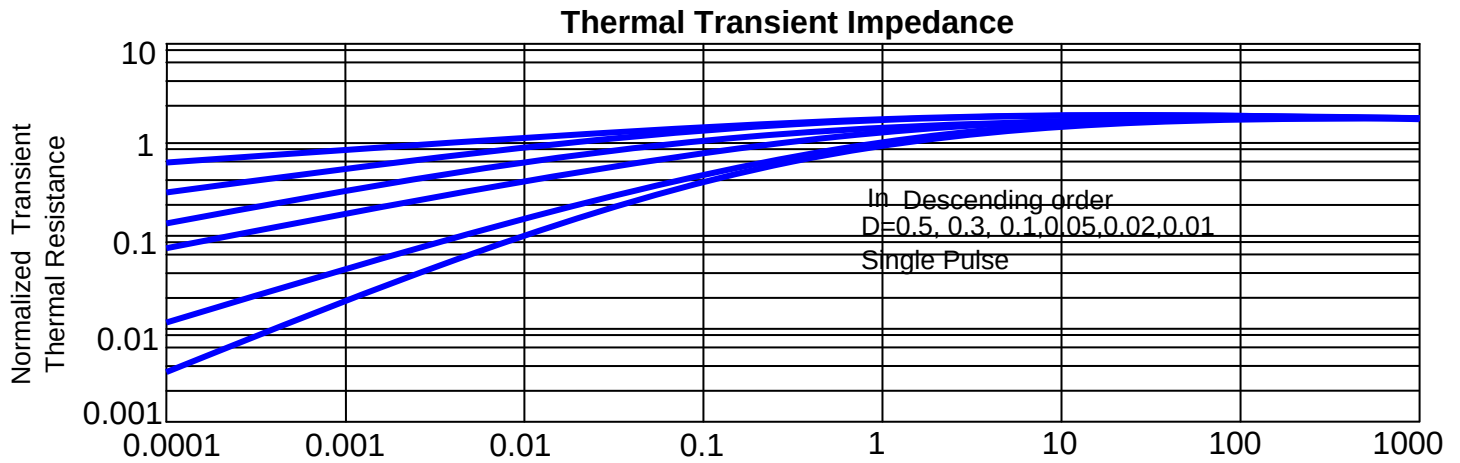
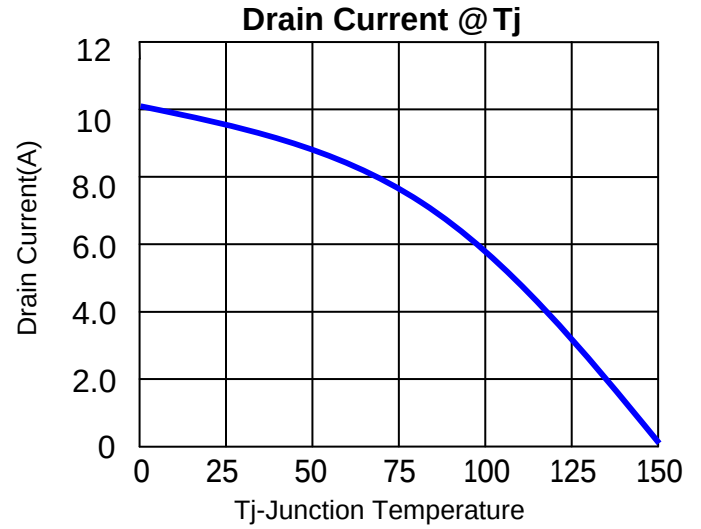
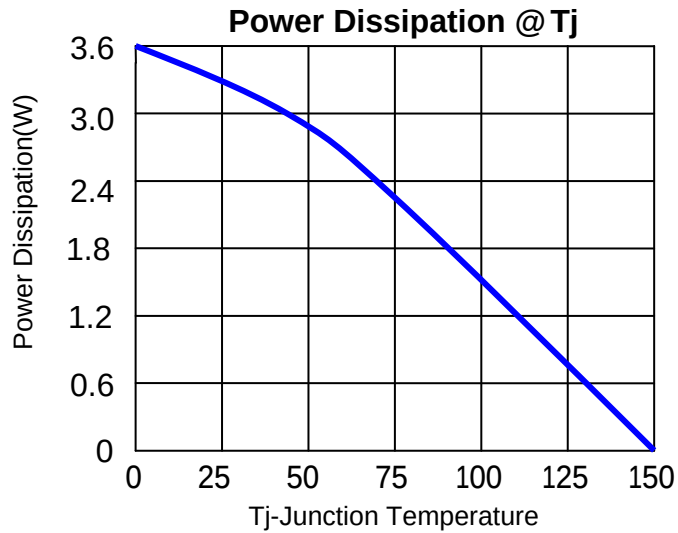
TYPICAL CHARACTERISTICS (25 °C Unless Note)



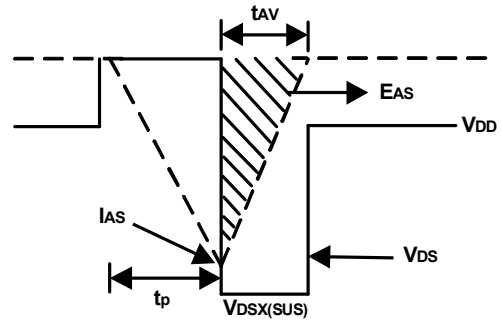
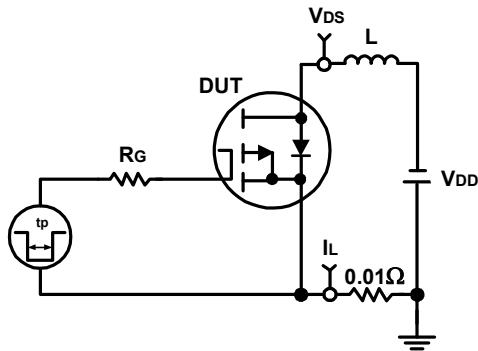
TYPICAL CHARACTERISTICS (continuous)



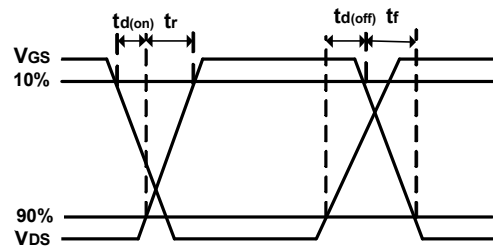
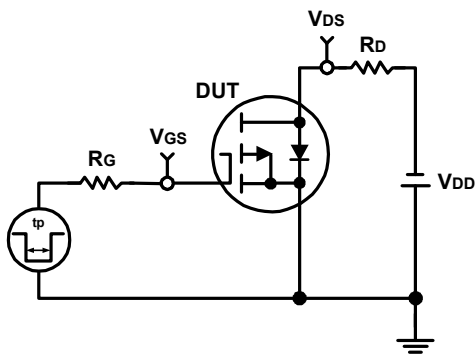
TYPICAL CHARACTERISTICS (continuous)



Avalanche Test Circuit and Waveforms

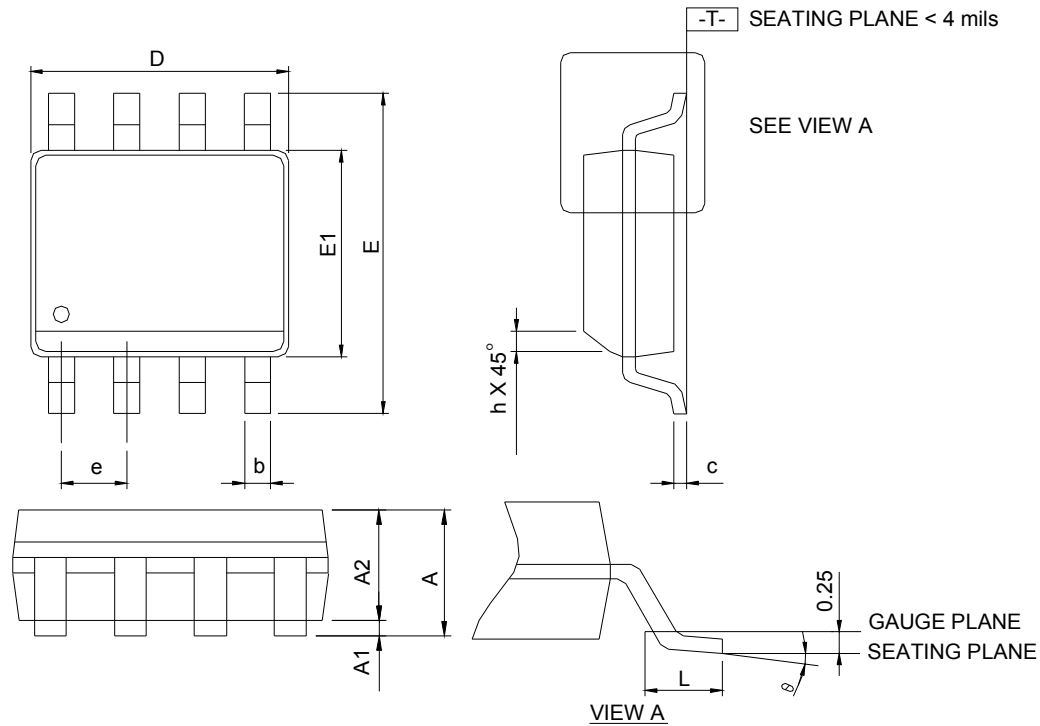


Switching Time Test Circuit and Waveforms



Package Information

SOP-8



SOP-8	SOP-8			
	MILLIMETERS		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	-	1.75	-	0.069
A1	0.10	0.25	0.004	0.010
A2	1.25	-	0.049	-
b	0.31	0.51	0.012	0.020
c	0.17	0.25	0.007	0.010
D	4.80	5.00	0.189	0.197
E	5.80	6.20	0.228	0.244
E1	3.80	4.00	0.150	0.157
e	1.27 BSC		0.050 BSC	
h	0.25	0.50	0.010	0.020
L	0.40	1.27	0.016	0.050
θ	0°	8°	0°	8°

Note: 1. Follow JEDEC MS-012 AA.

2. Dimension "D" does not include mold flash, protrusions or gate burrs. Mold flash, protrusion or gate burrs shall not exceed 6 mil per side.

3. Dimension "E" does not include inter-lead flash or protrusions. Inter-lead flash and protrusions shall not exceed 10 mil per side.

RECOMMENDED LAND PATTERN

