

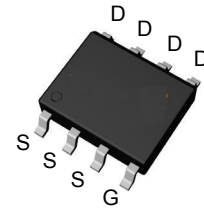
P-Channl Enhancement Mode MOSFET

- -30V/-10A
- $R_{DS(ON)}=15m\Omega$ (typ) @VGS=-10V
 $R_{DS(ON)}=25m\Omega$ (typ) @VGS=-4.5V
- 100% UIS & RG Tested
- Reliableand Rugged
- Lead Freeand Green Devices Available
(RoHS Compliant)

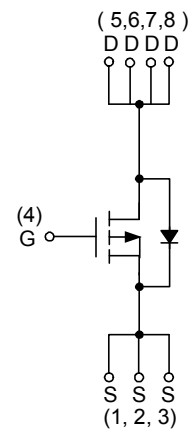
Applications

- Power Management for Industrial DC/DC Converters

Pin Description



Top View of SOP8



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		-30	V
V _{GSS}	Gate-Source Voltage		±25	
I _D	Continuous Drain Current (T _J =150°C)		-10.5	A
I _{DM}			-75	
I _S	Diode Continuous Forward Current	Tc=25°C	-3	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

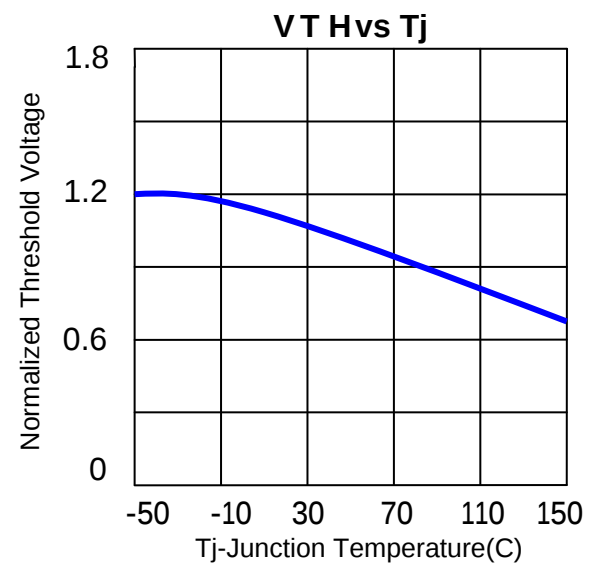
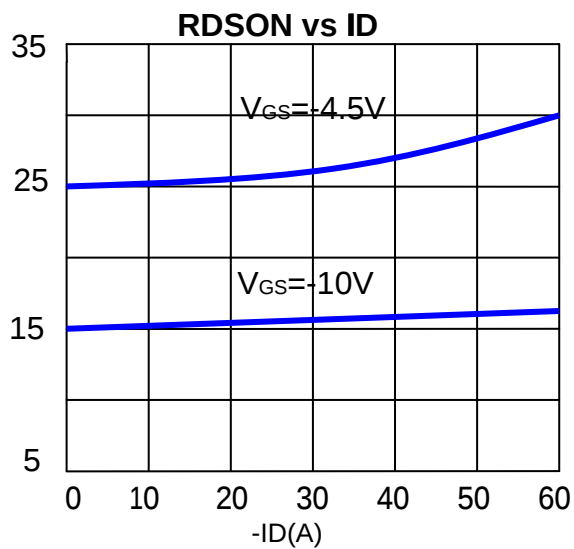
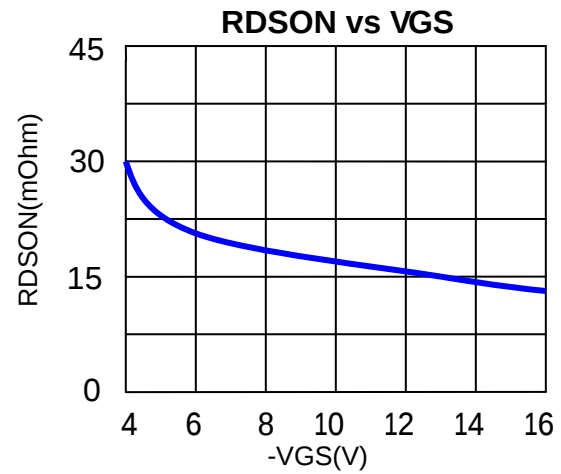
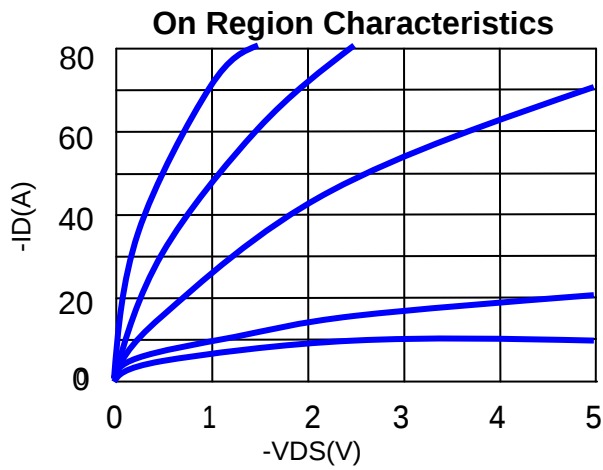
Electrical Characteristics (T_A = 25°C unless otherwise noted)

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	-	15	20	mΩ
		V _{GS} =-4.5V, I _{DS} =-5A	-	25	32	
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	-	

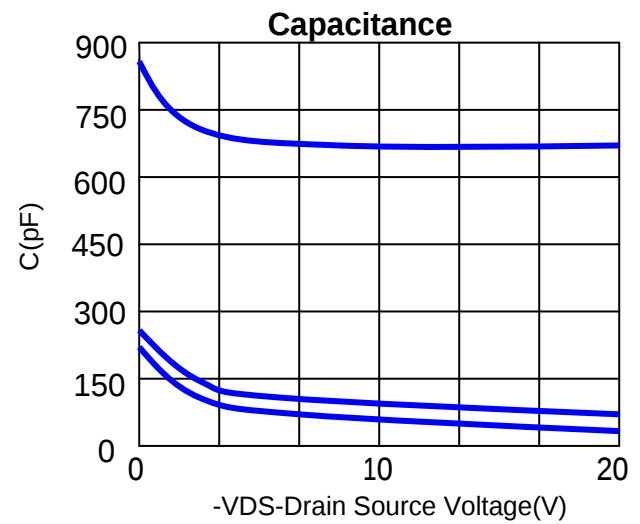
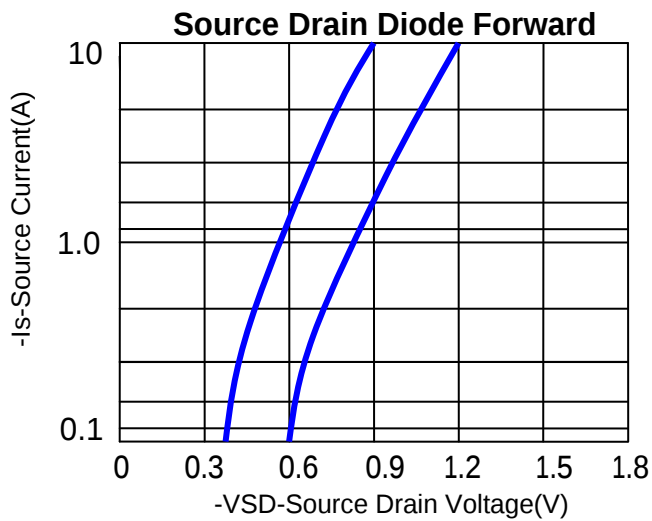
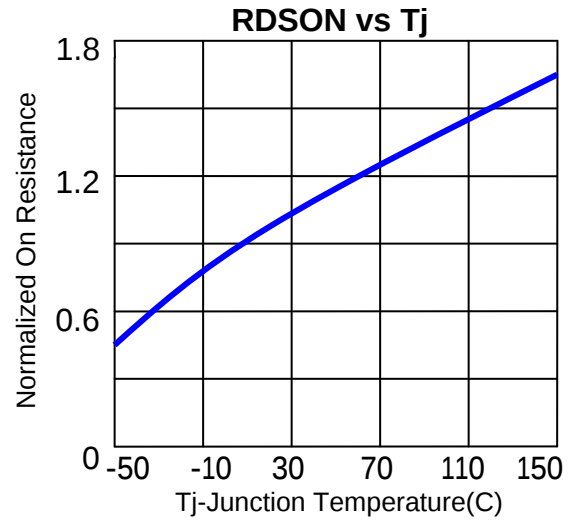
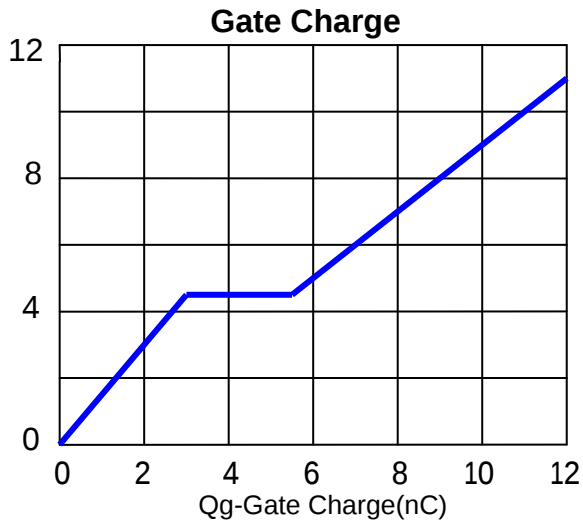
Note: 1. Pulse test: pulse width≤300uS, duty cycle≤2%

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

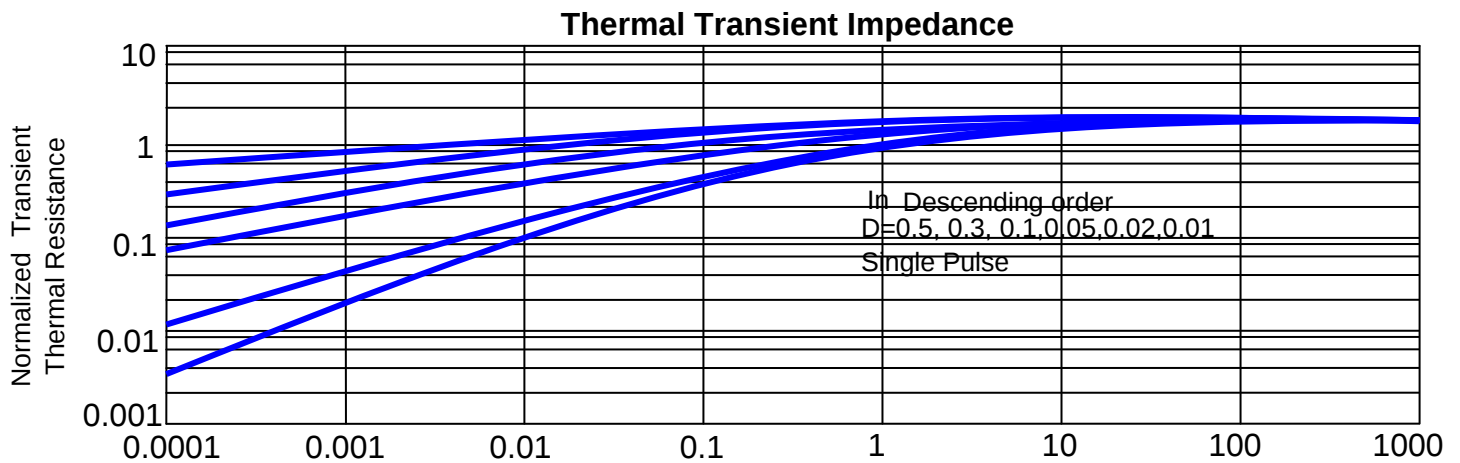
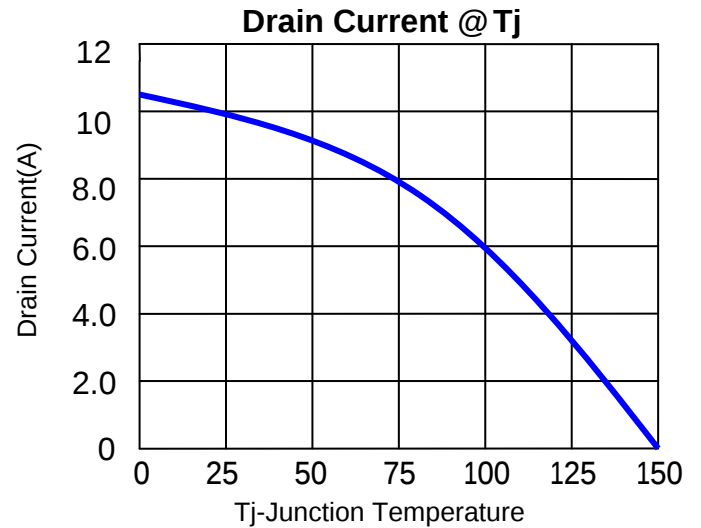
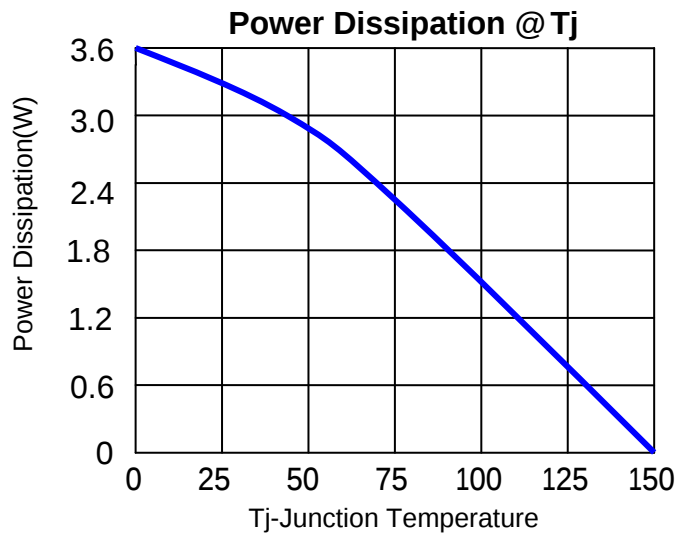
TYPICAL CHARACTERISTICS (25 °C Unless Note)



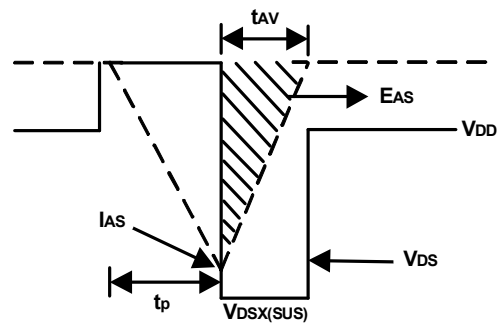
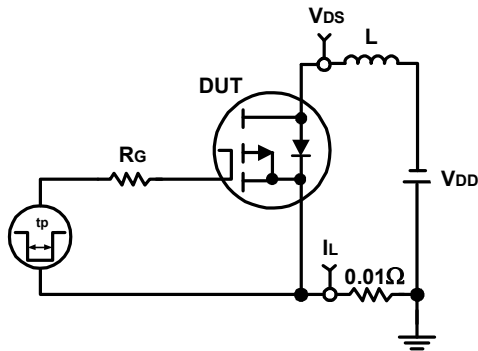
TYPICAL CHARACTERISTICS (continuous)



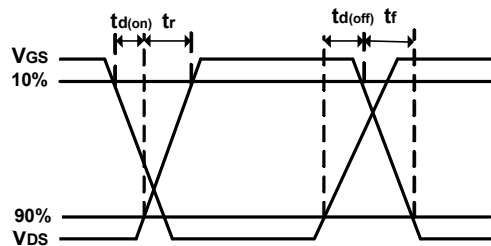
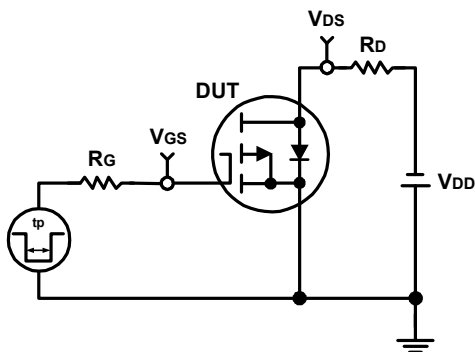
TYPICAL CHARACTERISTICS (continuous)



Avalanche Test Circuit and Waveforms

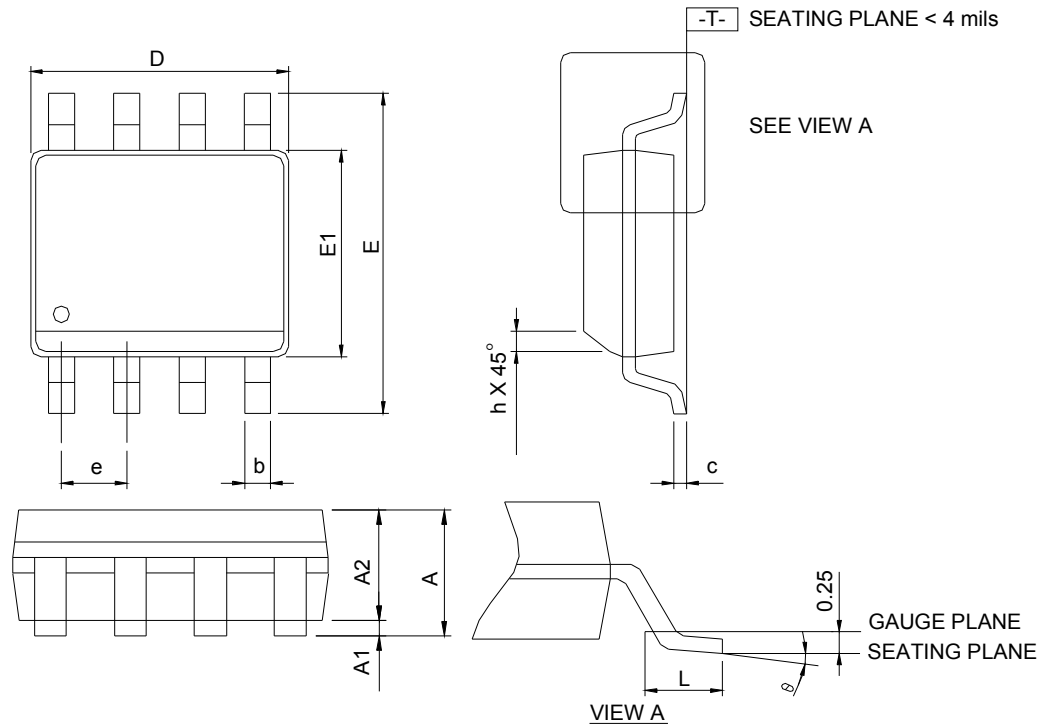


Switching Time Test Circuit and Waveforms



Package Information

SOP8



SOP8	SOP8			
	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.

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

