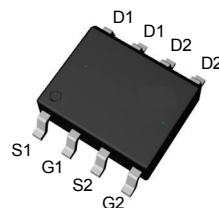


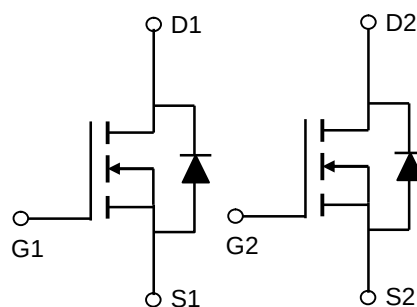
Dual N-Channel Enhancement Mode MOSFET

- 20V/6A
- $R_{DS(ON)}=15m\Omega$ (typ) @VGS=10V
 $R_{DS(ON)}=17m\Omega$ (typ) @VGS=4.5V
- 100% UIS & RG Tested
- Reliable and Rugged
- Lead Free and Green Devices Available (RoHS Compliant)

Pin Description



Top View of SOP-8



N-Channel MOSFET

Applications

- Power Management for Industrial DC/DC Converters

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	
I _D	Continuous Drain Current ^A	T _A =25°C	6	A
		T _A =70°C	5.5	
I _{DM}	Pulsed Drain Current ^B		40	A
T _{STG} , T _j	Storage Temperature Range		-55 to 150	°C
P _D	Power Dissipation	T _A =25°C	2	W
		T _A =70°C	1.28	
R _{θJL}	Thermal Resistance-Junction to Case		40	°C/W
R _{θJA}	Thermal Resistance-Junction to Ambient ^A	t≤10S	62.5	°C/W
		Steady State	110	°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

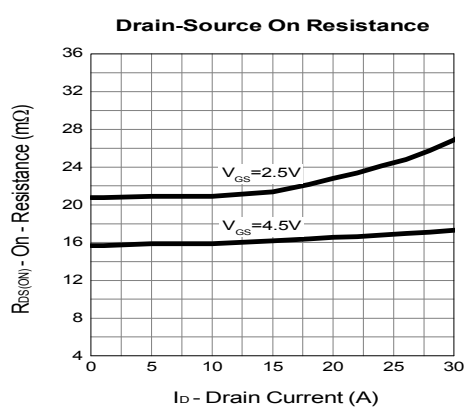
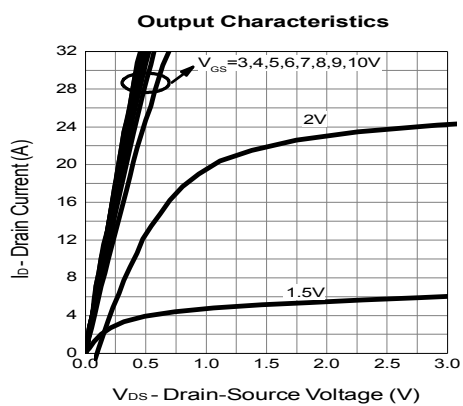
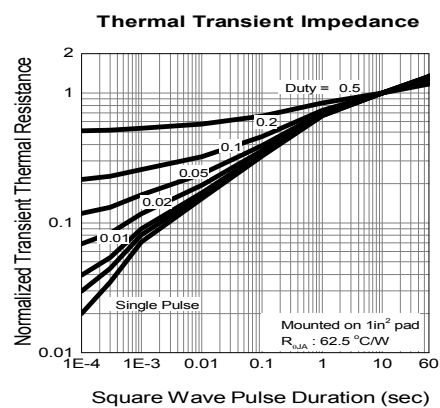
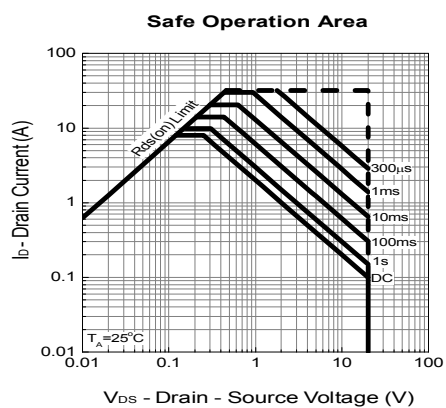
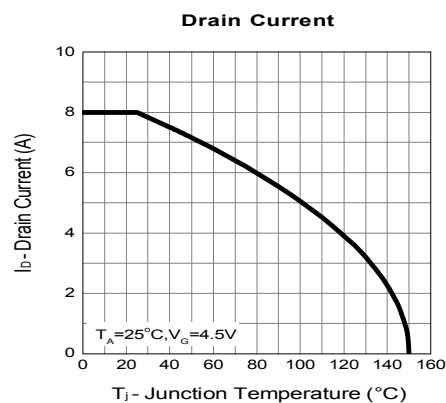
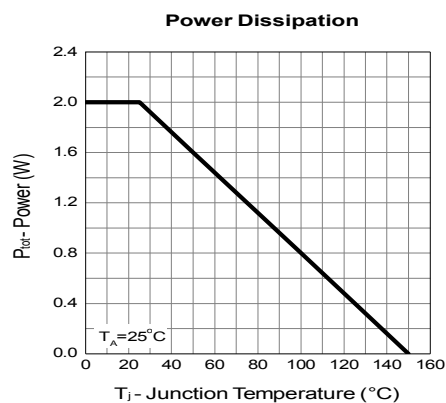
Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _{DS} =250μA	20	-	-	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =12V, V _{GS} =0V	-	-	1	μA
		T _J =55°C			5	
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _{DS} =250μA	0.4	0.75	1.1	V
I _{GSS}	Gate Leakage Current	V _{GS} =±12V, V _{DS} =0V	-	-	±100	nA
R _{DS(ON)}	Drain-Source On-state Resistance	V _{GS} =10V, I _{DS} =6A	-	15	23	mΩ
		V _{GS} =4.5V, I _{DS} =6A	-	17	26	
Body Diode Characteristics						
V _{SD}	Diode Forward Voltage	I _{SD} =1A, V _{GS} =0V	-	0.8	1.3	V
Dynamic Characteristics						
C _{ISS}	Input Capacitance	V _{GS} =0V, V _{DS} =15V, Frequency=1.0MHz	-	520	-	pF
C _{OSS}	Output Capacitance		-	105	-	
C _{RSS}	Reverse transfer capacitance		-	60	-	
t _{d(ON)}	Turn-on delay Time	V _{GS} =10V ,V _{DS} =15V R _G =3Ω, I _D =1A	-	4	-	nS
t _r	Turn-on rise Time		-	6	-	
t _{d(OFF)}	Turn-off delay Time		-	25	-	
t _f	Turn-off rise Time		-	4	-	
Gate Charge Characteristics						
Q _g	Total Gate Charge	V _{DS} =15V, V _{GS} =10V, I _{DS} =6A	-	15.6	-	nC
Q _{gs}	Gate-Source Charge		-	1.3	-	
Q _{gd}	Gate-Drain Charge		-	2.5	-	

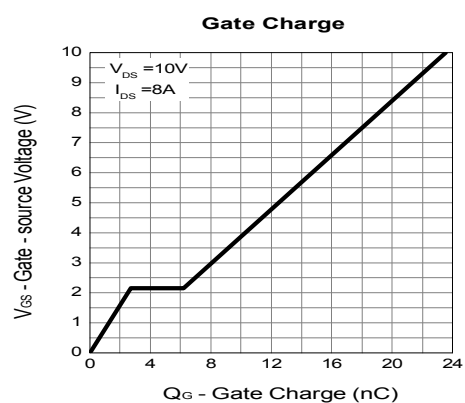
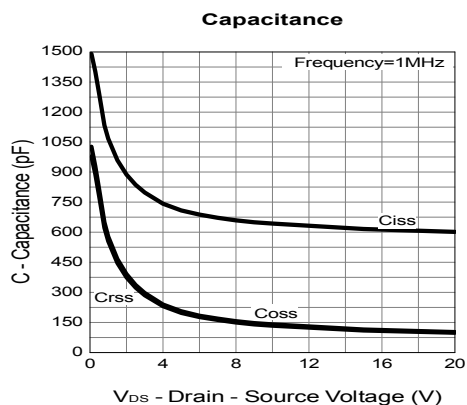
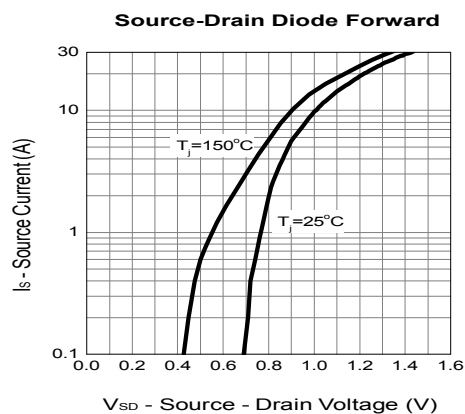
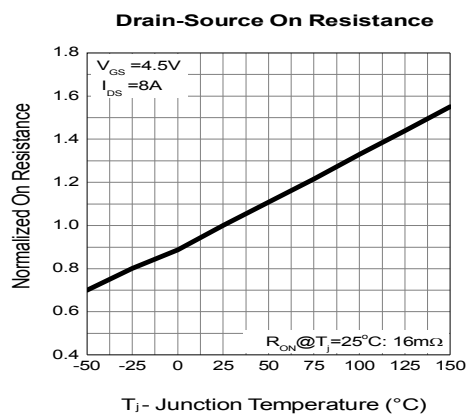
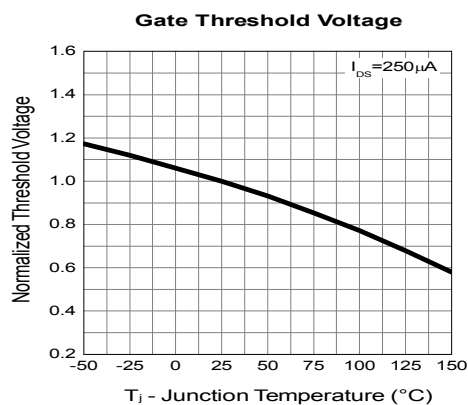
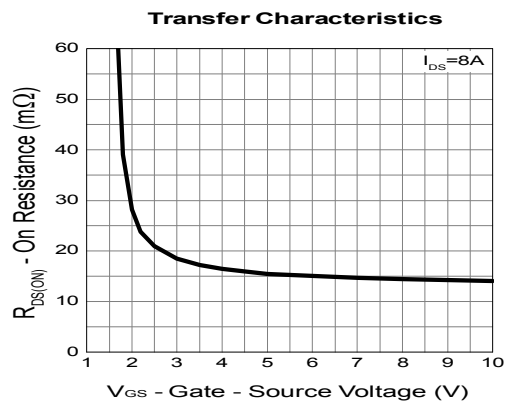
Note: 1. Pulse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$

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

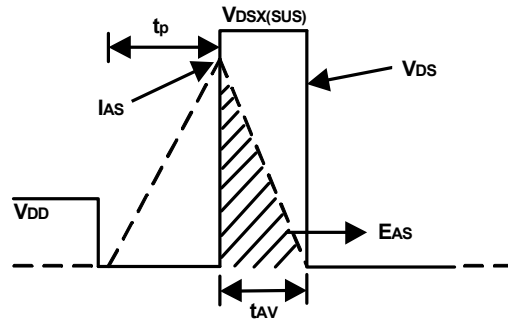
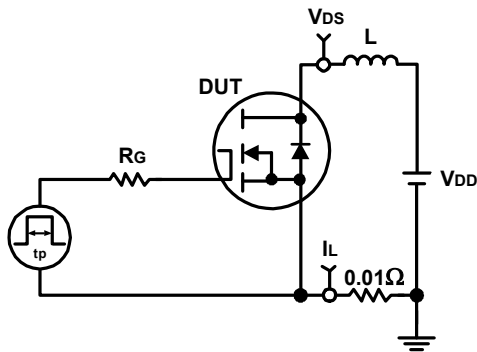
■ **TYPICAL CHARACTERISTICS** (25 °C Unless Note)



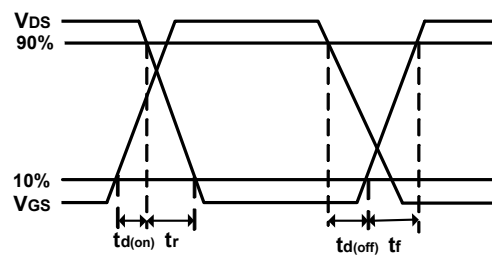
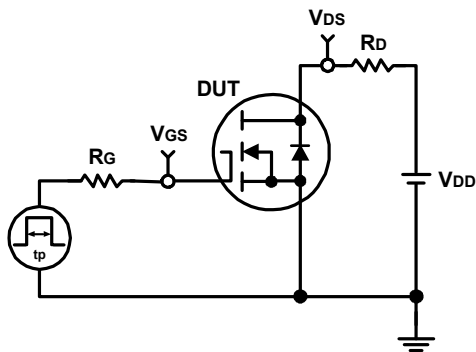
■ TYPICAL CHARACTERISTICS (continuous)



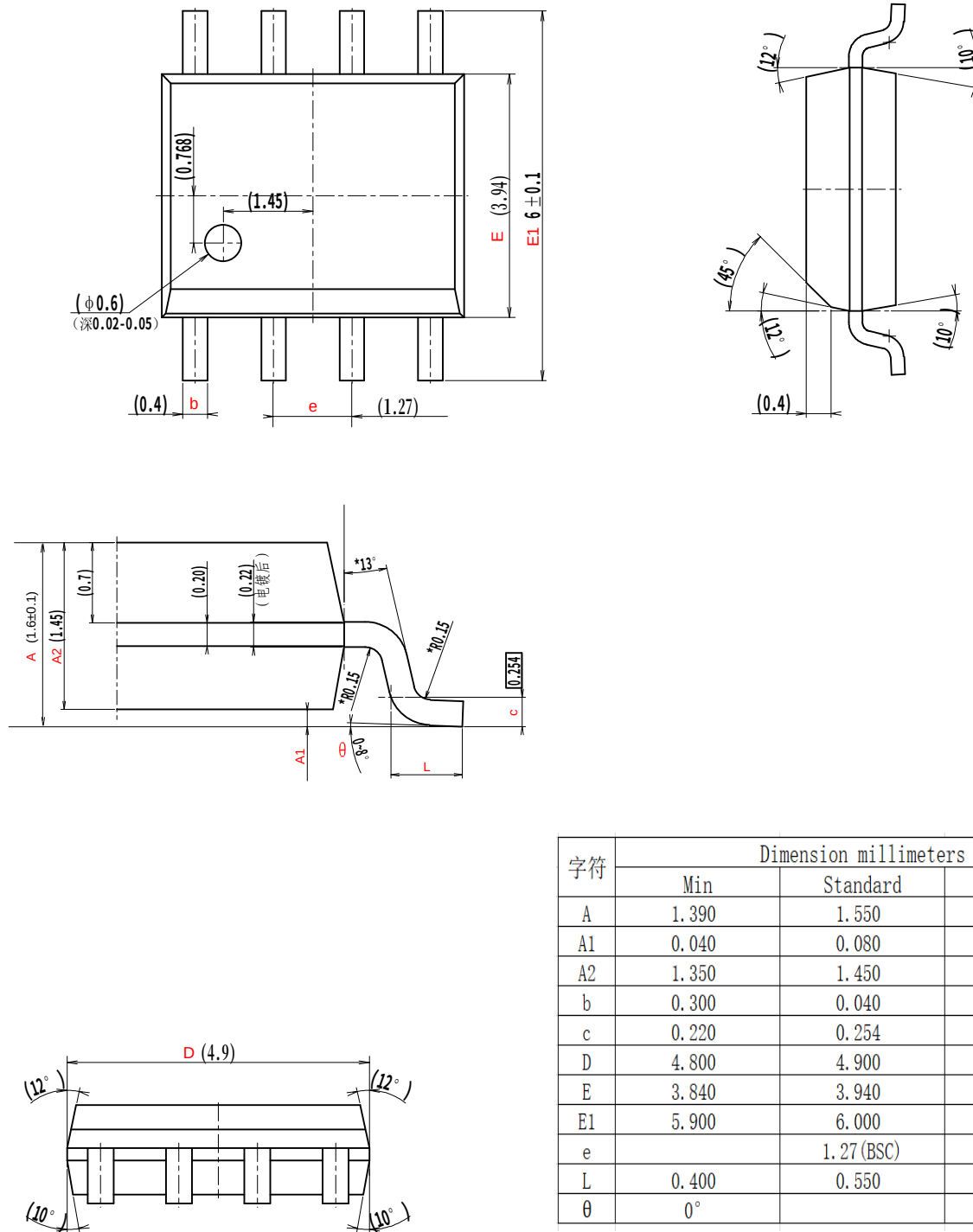
Avalanche Test Circuit and Waveforms



Switching Time Test Circuit and Waveforms



■ SOP8 PACKAGE OUTLINE DIMENSIONS



字符	Dimension millimeters		
	Min	Standard	Max
A	1.390	1.550	1.700
A1	0.040	0.080	0.150
A2	1.350	1.450	1.550
b	0.300	0.040	0.500
c	0.220	0.254	0.280
D	4.800	4.900	5.000
E	3.840	3.940	4.040
E1	5.900	6.000	6.100
e		1.27 (BSC)	
L	0.400	0.550	0.700
θ	0°		8°