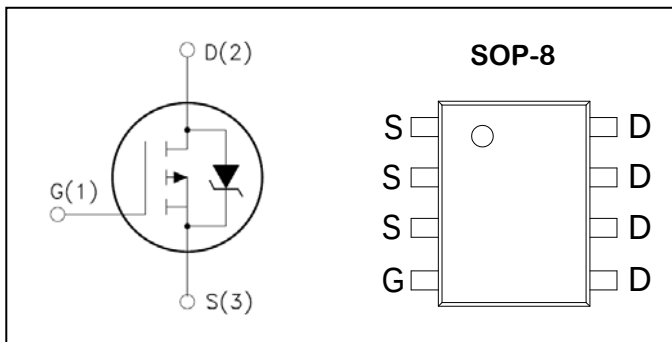


P-Channel Logic Level Enhancement Mode Field Effect Transistor

PRODUCT SUMMARY

V_{DSS}	I_D	$R_{DS(ON)}$ (m Ω)
-30V	-9.1A	20m Ω



Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter		Ratings	Unit
Common Ratings				
V _{DSS}	Drain-Source Voltage		-30	V
V _{GSS}	Gate-Source Voltage		±20	
T _J	Maximum Junction Temperature		150	°C
T _{STG}	Storage Temperature Range		-55 to 150	°C
I _S	Diode Continuous Forward Current	T _C =25°C	-2.1	A
Mounted on Large Heat Sink				
I _{DM}	300μs Pulse Drain Current Tested(1)	T _C =25°C	-50	A
I _D	Continuous Drain Current	T _C =25°C	-9.1	A
		T _C =75°C	-4.5	A
P _D	Maximum Power Dissipation	T _C =25°C	2.5	W
		T _C =75°C	1.6	W

Thermal Characteristics

Symbol	Parameter	Ratings	Unit
R_{thJC}	Thermal resistance junction-case max	3	$^\circ\text{C/W}$
R_{thJA}	Thermal resistance junction-ambient max(PCB mounted) (2)	62.5	$^\circ\text{C/W}$

- Pulse width limited by maximum junction temperature.
- 1-in² 2oz Cu PCB board

Electrical Characteristics (TA=25°C Unless Otherwise Noted)

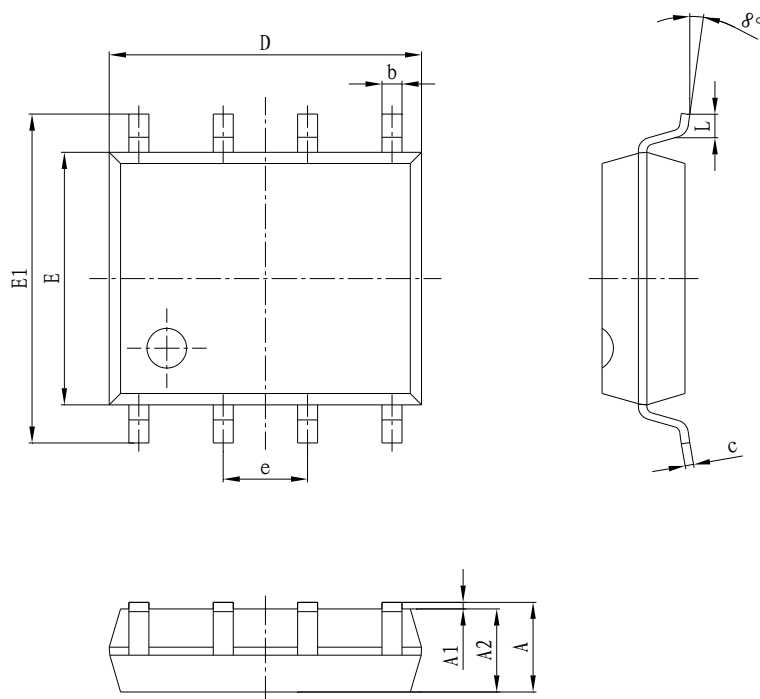
Symbol	Parameter	Test conditions	Min.	Typ.	Max.	Unit
On/off Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _{DS} =-250uA	-30	--	--	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = -30V, V _{GS} =0V	--	--	1	uA
		V _{DS} =-30V,V _{GS} =0V T _J =125°C	--	--	10	
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _{DS} =-250uA	-1	-1.3	-3	V
I _{GSS}	Gate Leakage Current	V _{GS} = ± 20V, V _{DS} =0V	--	--	± 100	nA
R _{DS(ON)}	Drain-SourceOn-stateResistance ⁽²⁾	V _{GS} = -10V, I _{DS} =-9.1A	--	15	20	mΩ
		V _{GS} = -4.5V, I _{DS} =-6.9A	--	20	35	
Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{GS} =0V, V _{DS} = -8V, Frequency=1.0MHz	--	1837.3	--	pF
C _{oss}	Output Capacitance		--	225.93	--	
C _{rss}	Reverse Transfer Capacitance		--	151.23	--	
Switching Characteristics						
t _{d(ON)}	Turn-on Delay Time ⁽¹⁾	V _{DS} =-15V, I _D = -1A, V _{GS} = -10V, R _{GEN} =6 Ω	--	15.44	--	ns
t _r	Turn-on Rise Time ⁽¹⁾		--	5.04	--	
t _{d(OFF)}	Turn-off Delay Time ⁽¹⁾		--	71.04	--	
t _f	Turn-off Fall Time ⁽¹⁾		--	16.8	--	
Q _g	Total Gate Charge ⁽¹⁾	V _{DS} =15V, V _{GS} = -10V, I _{DS} =-9.1A	--	33.82	--	nC
Q _{gs}	Gate-Source Charge ⁽¹⁾		--	4.93	--	
Q _{gd}	Gate-Drain Charge ⁽¹⁾		--	5.2	--	
Diode Characteristics						
V _{SD}	Diode Forward Voltage ⁽²⁾	I _{SD} = -2.1A, V _{GS} = 0	--	--	-1.2	V

NOTES:

1. Independent of operating temperature.
2. Pulse Test : Pulse width ≤ 300 μs, Duty cycle ≤ 2%

PACKAGE MECHANICAL DATA

SOP-8 Package Dimension



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E1	5.800	6.200	0.228	0.244
E	3.800	4.000	0.150	0.157
e	1.270TYP		0.050TYP	
e1	4.500	4.700	0.177	0.185
L	0.400	1.270	0.016	0.050