

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
-30V	60mΩ@-10V	-5.1A
	105mΩ@-4.5V	

Feature

- Advanced trench process technology
- High Density Cell Design For Ultra Low On-Resistance

Application

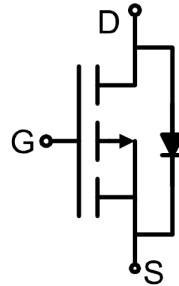
- Load Switch
- PWM applications
- Power management

Package

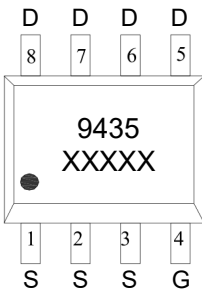


SOP-8

Circuit diagram



Marking



Absolute maximum ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V _{DS}	-30	V
Gate-Source Voltage	V _{GS}	±20	V
Continuous Drain Current	I _D	-5.1	A
Pulsed Drain Current	I _{DM}	-20	A
Power Dissipation	P _D	1.4	W
Thermal Resistance from Junction to Ambient	R _{θJA}	89	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55 ~ +150	°C

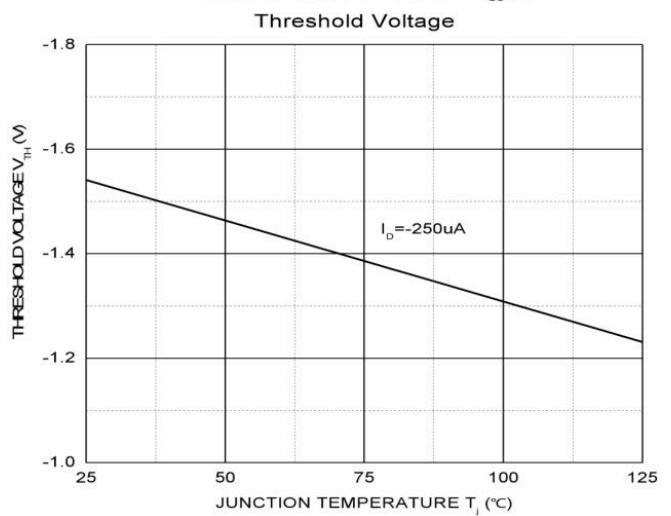
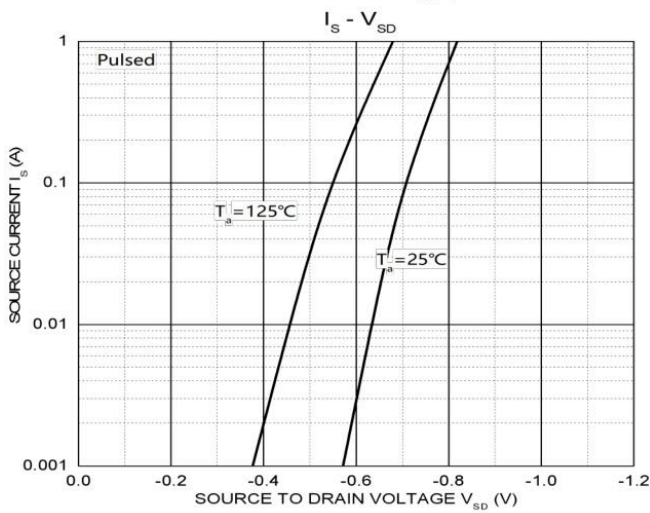
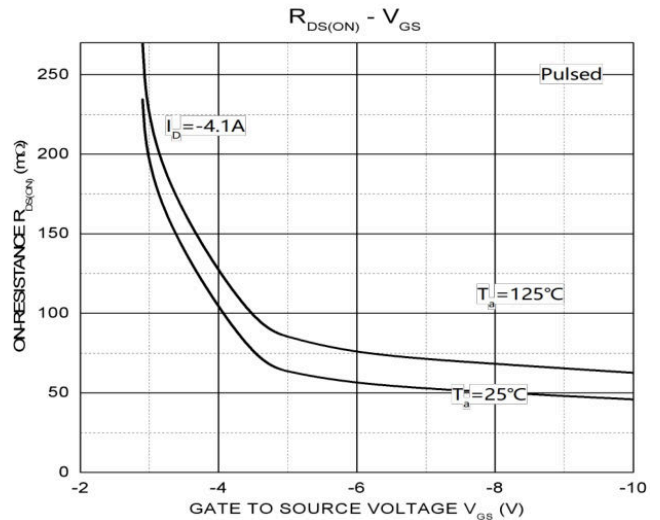
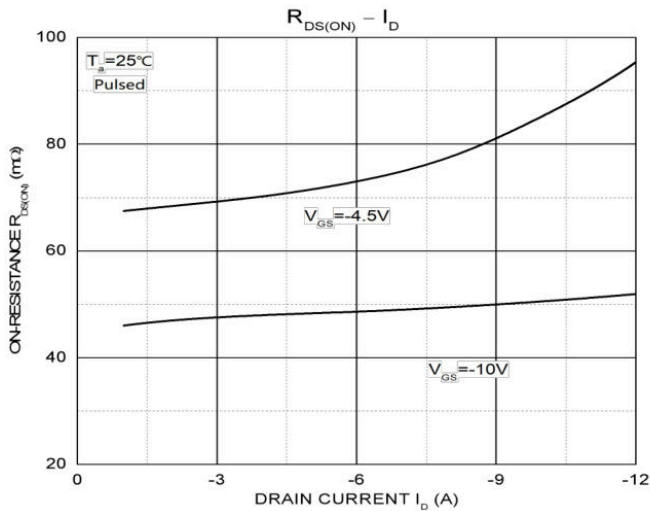
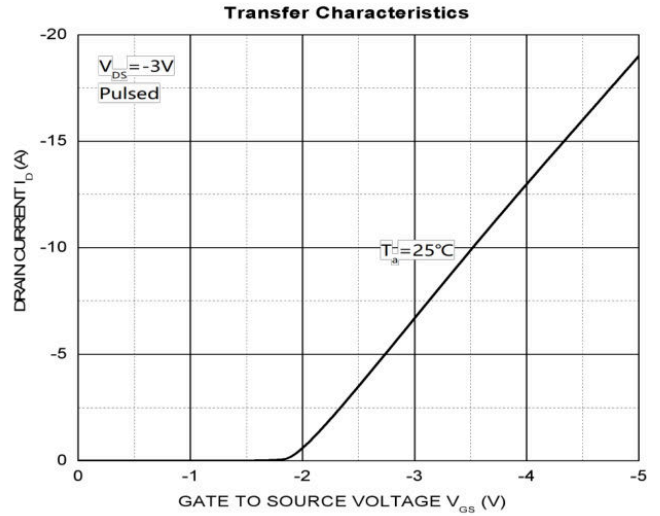
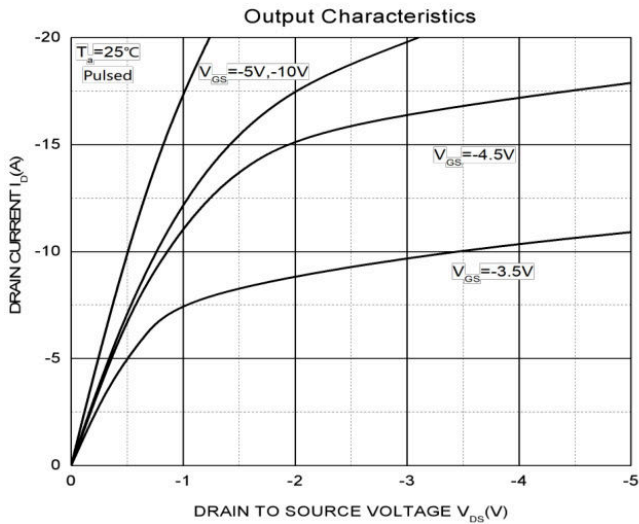
Electrical characteristics (T_A=25 °C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-30			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -24V, V _{GS} = 0V			-1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±100	nA
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-1		-2.1	V
Drain-source on-resistance ¹⁾	R _{DS(on)}	V _{GS} = -10V, I _D = -4.6A		40	60	mΩ
		V _{GS} = -4.5V, I _D = -2A		60	105	
Forward transconductance ¹⁾	g _{FS}	V _{DS} = -15V, I _D = -4.6A	5			S
Dynamic characteristics²⁾						
Total Gate Charge	Q _g	V _{DS} = -15V, V _{GS} = -10V, I _D = -4.6A		40		nC
Gate-Source Charge	Q _{gs}			4		
Gate-Drain Charge	Q _{gd}			6.3		
Turn-on delay time	t _{d(on)}	V _{DD} = -15V, V _{GS} = -10V, I _D = -1A, R _{GEN} = 6Ω, R _L = 15Ω			30	nS
Turn-on rise time	t _r				60	
Turn-off delay time	t _{d(off)}				120	
Turn-off fall time	t _f				100	
Source-Drain Diode characteristics						
Diode Forward voltage	V _{DS}	V _{GS} = 0V, I _S = -2.6A			-1.2	V

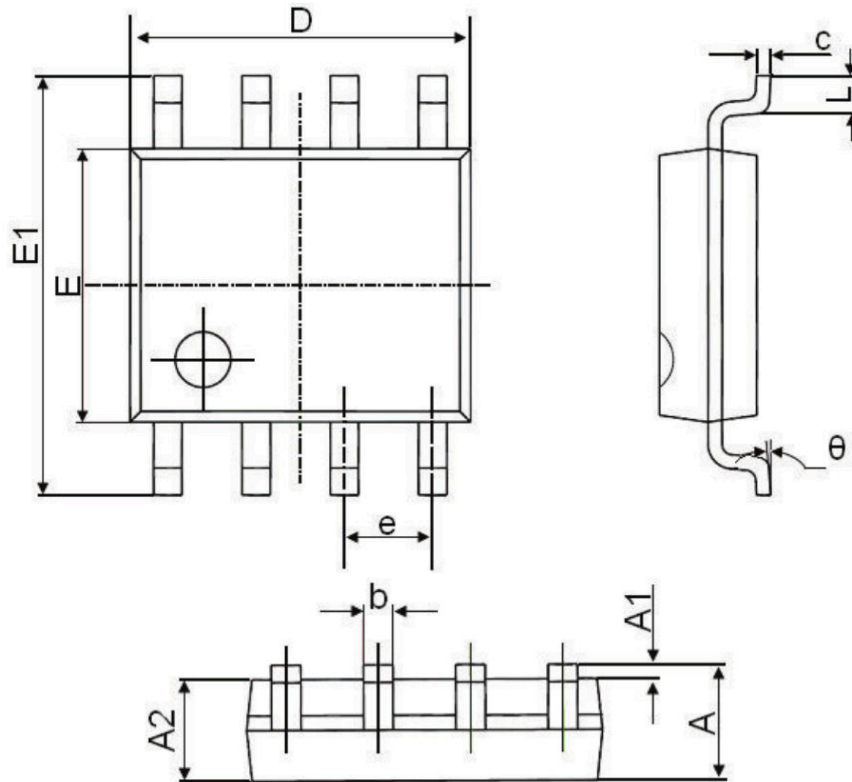
Notes:

- 1) Pulse Test: Pulse Width < 300μs, Duty Cycle ≤ 2%.
- 2) Guaranteed by design, not subject to production testing.

Typical Characteristics



SOP-8 Package Information



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
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270(BSC)		0.050(BSC)	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°