

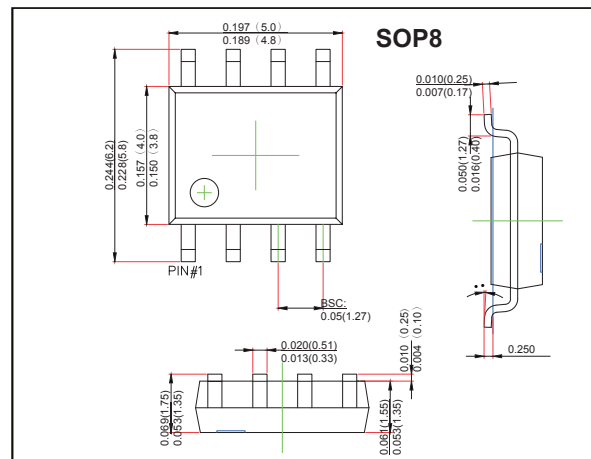
SOP8 Plastic-Encapsulate MOSFETS

FEATURE

- P-Channel Power MOSFET
- $V_{DS} = -30V$
- $R_{DS(ON)} < 0.02\Omega @ V_{GS} = -10V$
- $R_{DS(ON)} < 0.035\Omega @ V_{GS} = -4.5V$

MECHANICAL DATA

- Case style: SOP-8 molded plastic
- Mounting position: any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	-8.8	A
Pulsed Drain Current	I_{DM}	-50	A
Power Dissipation	P_D	2.5	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	50	°C/W
Junction Temperature		150	°C
Storage Temperature Range	T_J, T_{stg}	-55 ~ +150	°C

MOSFET ELECTRICAL CHARACTERISTICS $T_A = 25^\circ C$ unless otherwise specified

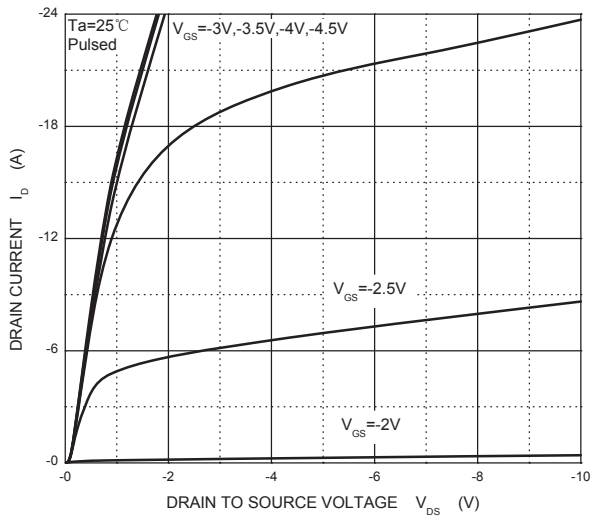
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-30			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = -30V, V_{GS} = 0V$ $V_{DS} = -15V, V_{GS} = 0V$ $T_J = 70^\circ C$			-1 -5	μA
Gate-body leakage current	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			± 100	nA
Gate-threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-1.0	-1.7	-3.0	V
Static drain-source on-state resistance	$R_{DS(on)}$	$V_{GS} = -10V, I_D = -8.0A$		0.015	0.02	Ω
		$V_{GS} = -4.5V, I_D = -5.0A$		0.022	0.035	Ω
Forward transconductance	g_{fs}	$V_{DS} = -15V, I_D = -8.0A$		11		S
Total gate charge	Q_g	$V_{DS} = -15V, V_{GS} = -10V,$ $I_D = -4.6A$		47	60	nC
	Q_{gs}			7.1		
	Q_{gd}			8		
Turn-on delay time	$t_{d(on)}$	$V_{DD} = -15V, I_D = -1A,$ $V_{GEN} = -10V, R_G = 6\Omega,$ $R_L = 15\Omega$		16	24	ns
Turn-on rise time	t_r			76	110	
Turn-off delay time	$t_{d(off)}$			130	200	
Turn-off fall time	t_f			90	140	
Source-Drain reverse Recovery Time	T_{rr}	$I_F = -2.5A, di/dt = 100A/\mu S$		34	51	ns
Drain-source diode forward voltage	V_{SD}	$V_{GS} = 0V, I_S = -2A$			-1.2	V
Continuous drain-source diode forward current	I_S			-2.5		A

Notes: Pulse Test : Pulse Width $\leq 300\mu s$, duty cycle $\leq 2\%$.

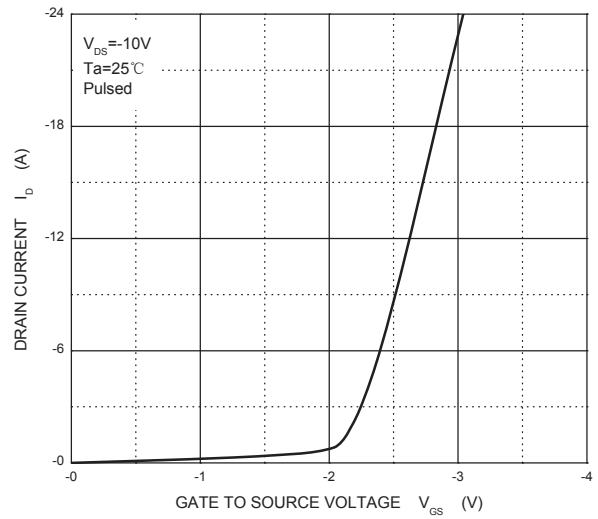
Marking: 4435

RATINGS AND CHARACTERISTIC CURVES

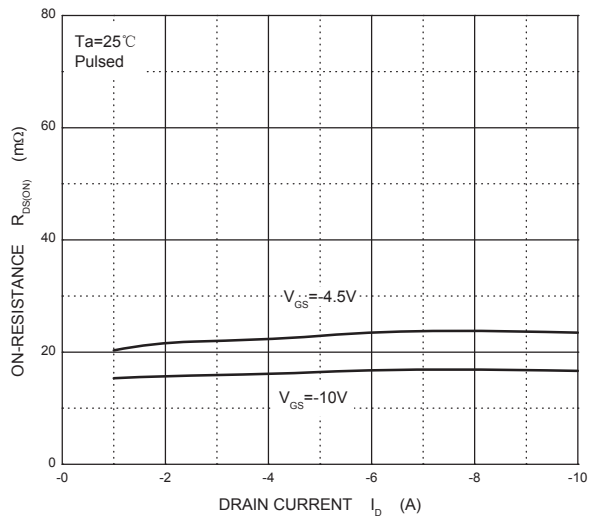
Output Characteristics



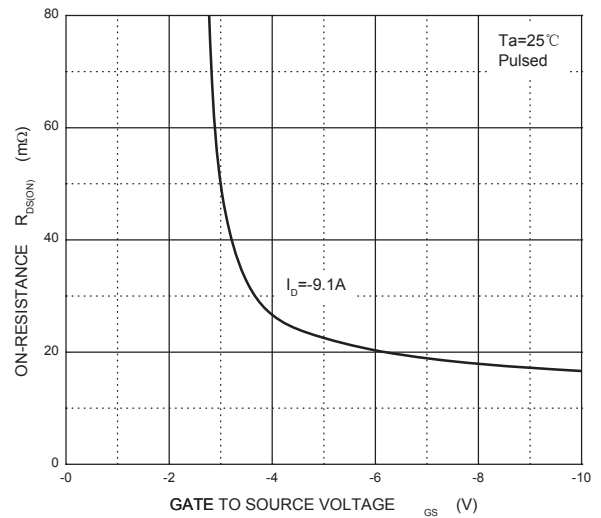
Transfer Characteristics



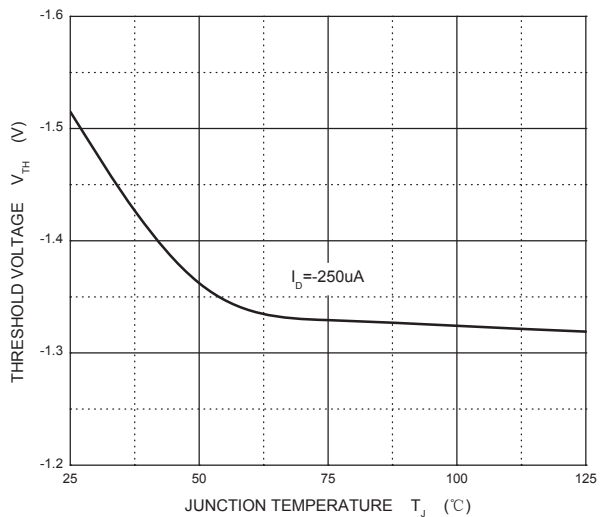
$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}



Threshold Voltage



I_S — V_{SD}

