HFZT

SI4435DY

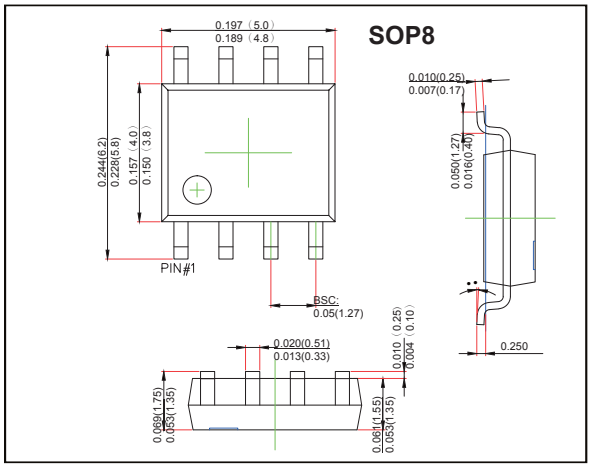
SOP8 Plastic-Encapsulate MOSFETS

FEATURE

- P-Channel Power MOSFET
- VDS = -30V
- RDS(ON) < 0.02Ω @ VGS=-10V
- RDS(ON) < 0.035Ω @ VGS=-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	℃/W
Junction Temperature		150	℃
Storage Temperature Range	T_J ,T_{stg}	-55 ~+150	℃

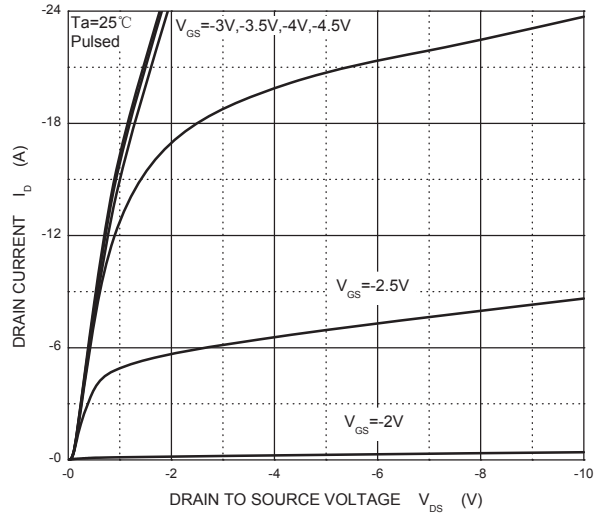
MOSFET ELECTRICAL CHARACTERISTICS T_A=25℃ unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off characteristics						
Drain-source breakdown voltage	$V_{(BR)\ DSS}$	V_{GS} = 0V, I_D =-250μA	-30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-30V, V_{GS} =0V VDS =-15V, VGS =0V TJ=70℃			-1 -5	μA
Gate-body leakage current	I_{GSS}	V_{DS} =0V, V_{GS} =±20V			±100	nA
Gate-threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-1.0	-1.7	-3.0	V
Static drain-source on-sate 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=6Ω, R_L=15Ω		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}	IF=-2.5A,di/dt=100A/uS		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

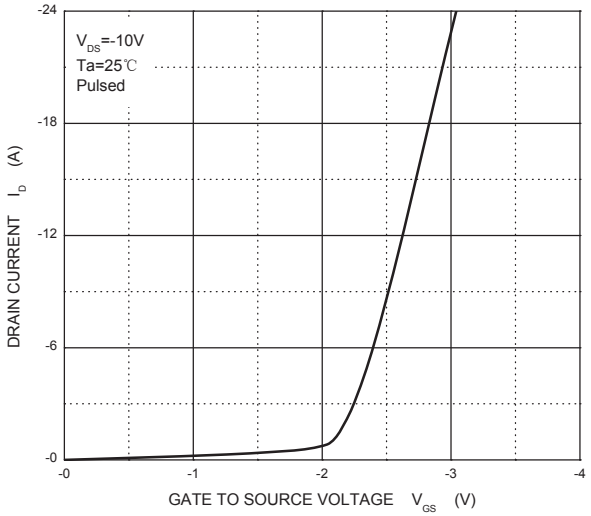
Notes: Pulse Test : Pulse Width≤300μs, duty cycle ≤2%.

RATINGS AND CHARACTERISTIC CURVES

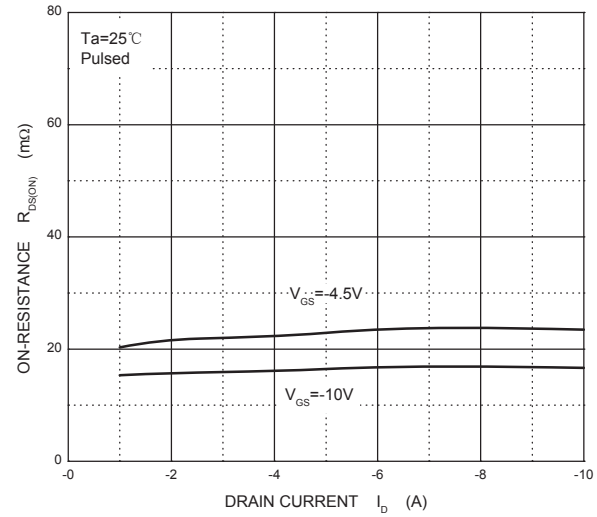
Output Characteristics



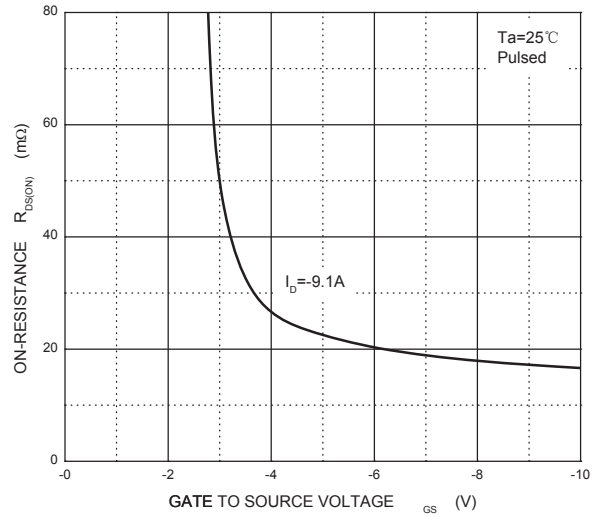
Transfer Characteristics



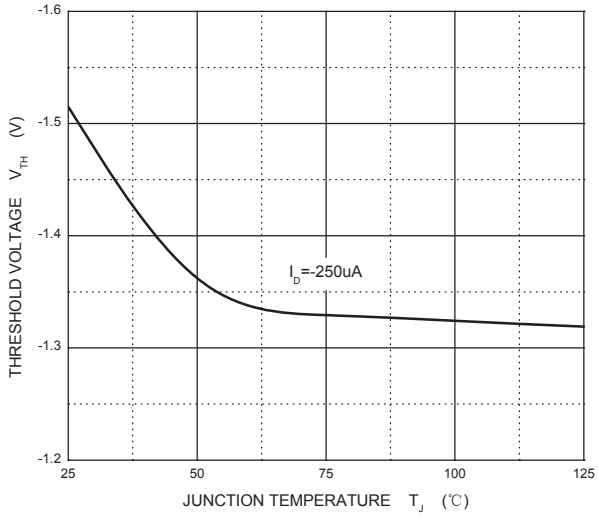
$R_{DS(ON)}$ —— I_D



$R_{DS(ON)}$ —— V_{GS}



Threshold Voltage



I_S —— V_{SD}