

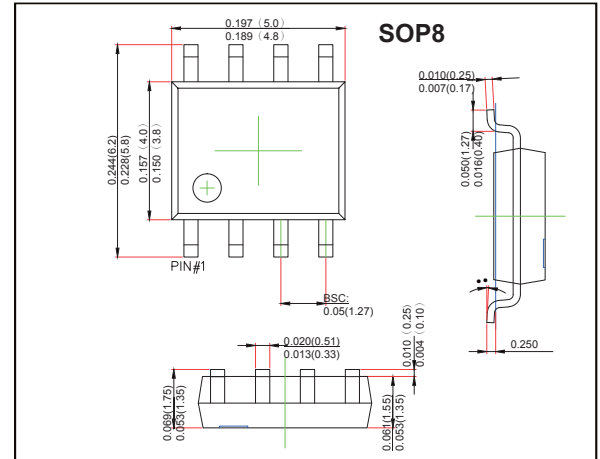
## SOP8 Plastic-Encapsulate MOSFETS

### 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	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_D$	-8.8	A
Pulsed Drain Current	$I_{DM}$	-50	A
Power Dissipation	PD	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
<b>Off characteristics</b>						
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	$\mu A$
Gate-body leakage current	$I_{GSS}$	$V_{DS} = 0V, V_{GS} = \pm 20V$			$\pm 100$	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	$\Omega$
		$V_{GS} = -4.5V, I_D = -5.0A$		0.022	0.035	$\Omega$
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	$T_{rr}$	$IF = -2.5A, di/dt = 100A/\mu S$		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

