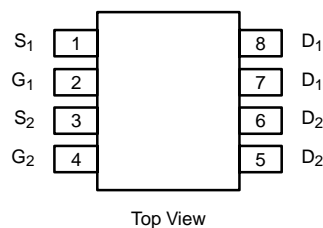
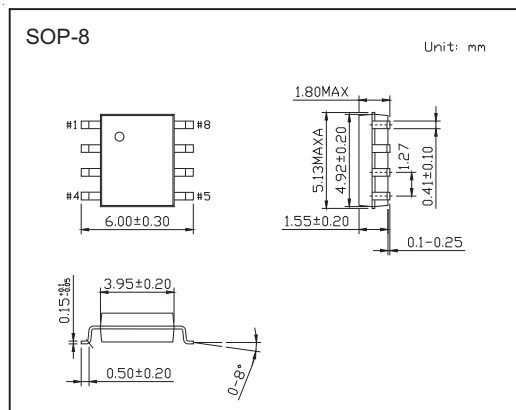
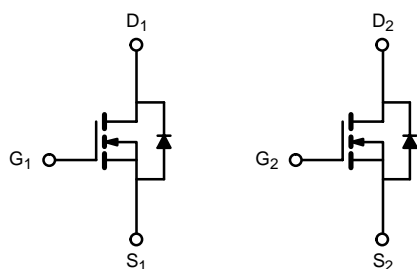


■ Features

- $R_{DS(on)} = 0.030 \Omega @ V_{GS} = 4.5 V$
- $R_{DS(on)} = 0.040 \Omega @ V_{GS} = 2.5 V.$



■ Absolute Maximum Ratings $T_A = 25^\circ C$

Parameter	Symbol	Rating	Unit	
Drain-Source Voltage	V_{DS}	20	V	
Gate-Source Voltage	V_{GS}	± 12	V	
Continuous Drain Current *1	I_D	$T_A=25^\circ C$	4.8	A
		$T_A=70^\circ C$	3.8	A
Pulsed Drain Current	I_{DM}	30	A	
Maximum Power Dissipation *1	P_D	$T_A = 25^\circ C$	1.25	W
		$T_A = 70^\circ C$	0.8	W
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	100	$^\circ C/W$	
Maximum Junction-to-Foot (Drain)	$R_{\theta JF}$	40	$^\circ C/W$	
Junction temperature and Storage temperature	$T_{j, T_{stg}}$	-55 to +150	$^\circ C$	

*1 Surface Mounted on 1" x 1" FR4 Board.

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	V _{GS} = 0 V, I _D = 250 μ A	20			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 20V, V _{GS} = 0V			1	μA
		V _{DS} = 20V, V _{GS} = 0V, T _J = 55°C			25	
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	0.6			V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±12V			±100	nA
Drain-Source On-State Resistance *2	r _{DS(on)}	V _{GS} = 4.5V, I _D = 6.5A		0.023	0.030	Ω
		V _{GS} = 2.5V, I _D = 5.4A		0.030	0.040	
On-State Drain Current *2	I _{D(on)}	V _{DS} = 5V, V _{GS} = 4.5V	20			A
Forward Transconductance *2	g _{fs}	V _{DS} = 15V, I _D = 6A		22		S
Total Gate Charge	Q _g	V _{DS} = 15V, V _{GS} = 4.5V, I _D = 6A		13	20	nC
Gate-Source Charge	Q _{gs}			3		
Gate-Drain Charge	Q _{gd}			3.3		
Turn-On Delay Time	t _{d(on)}	V _{DD} = 15 V, R _L = 15 Ω I _D ? 1 A, V _{GEN} = 4.5V, R _G = 6 Ω		22	35	ns
Rise Time	t _r			40	60	
Turn-Off Delay Time	t _{d(off)}			50	75	
Fall Time	t _f			20	30	
Continuous Source Current (Diode Conduction)	I _S				1	A
Diode Forward Voltage *2	V _{SD}	I _S = 1.7A, V _{GS} = 0 V		0.7	1.2	V

*2 Pulse test; pulse width ≤ 300 μ s, duty cycle ≤ 2 %.