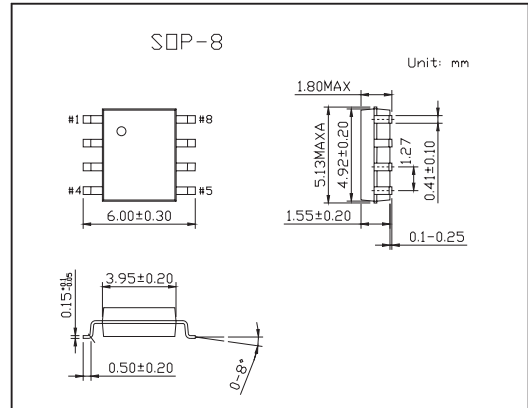
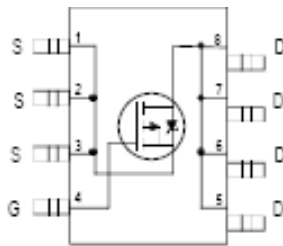


■ Features

- Advanced Process Technology
- Ultra Low On-Resistance
- P-Channel MOSFET
- Surface Mount
- Dynamic dv/dt Rating
- Fast Switching



■ Absolute Maximum Ratings Ta = 25°C


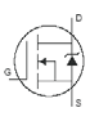
Parameter	Symbol	Rating	Unit
Continuous Drain Current, V _{GS} @ 10V @ T _A = 25°C	I _D	-4.6	A
Continuous Drain Current, V _{GS} @ 10V @ T _A = 70°C	I _D	-3.7	
Pulsed Drain Current *1	I _{DM}	-15	
Power Dissipation @T _C = 25°C	P _D	2.5	W
Linear Derating Factor		0.02	V
Gate-to-Source Voltage	V _{GS}	±20	V
Peak Diode Recovery dv/dt *2	dv/dt	-3	V/ns
Maximum Junction-to-Ambient *3	R _{θJA}	50	°C/W
Junction and Storage Temperature Range	T _J , T _{STG}	-55 to + 150	°C

*1 Repetitive rating; pulse width limited by max. junction temperature.

*2 I_{SD} ≤ -4.6A, di/dt ≤ 90A/μs, V_{DD} ≤ V_{(BR)DSS}, T_J ≤ 150°C

*3 Surface mounted on FR-4 board, t ≤ 10sec.

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain-to-Source Breakdown Voltage	V _{DSS}	V _{GS} = 0V, I _D = -250A	-30			V
Static Drain-to-Source On-Resistance	R _{DS(on)}	V _{GS} = -10V, I _D = -4.6A*1			0.070	Ω
		V _{GS} = -4.5V, I _D = -2.0A*1			0.130	
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250 μ A	-1.0		-3.0	V
Forward Transconductance	g _{fs}	V _{DS} = -15V, I _D = -4.6A*1		6.6		S
Drain-to-Source Leakage Current	I _{DSS}	V _{DS} = -24V, V _{GS} = 0V			-1.0	μ A
		V _{DS} = -16V, V _{GS} = 0V, T _J = 70°C			-5.0	
Gate-to-Source Forward Leakage	I _{GSS}	V _{GS} = -20V			-100	nA
Gate-to-Source Reverse Leakage		V _{GS} = 20V			100	
Total Gate Charge	Q _g	I _D = -4.6A		27	40	nC
Gate-to-Source Charge	Q _{gs}	V _{DS} = -15V		5.2		
Gate-to-Drain ("Miller") Charge	Q _{gd}	V _{GS} = -10V,*1		7.5		
Turn-On Delay Time	t _{d(on)}	V _{DD} = -15V I _D = -1.0A R _G = 6.0 Ω R _D = 10 Ω *1		14	30	ns
Rise Time	t _r			21	60	
Turn-Off Delay Time	t _{d(off)}			97	150	
Fall Time	t _f			71	100	
Internal Source Inductance	L _S	Between lead,6mm(0.25in.) from package and center of die contact 		2.5		nH
Internal Drain Inductance	L _D			4.0		
Input Capacitance	C _{iss}	V _{GS} = 0V V _{DS} = -10V f = 1.0MHz		870		pF
Output Capacitance	C _{oss}			720		
Reverse Transfer Capacitance	C _{rss}			220		
Reverse Recovery Time	t _{rr}	T _J = 25°C, I _F = -4.6A		70	100	ns
Reverse Recovery Charge	Q _{rr}	di/dt = 100A/μ s*1		100	180	nC
Forward Turn-On Time	t _{on}	Intrinsic turn-on time is negligible (turn-on is dominated by L _S +L _D)				
Continuous Source Current (Body Diode)	I _S	MOSFET symbol showing the integral reverse p-n junction diode. 			-2.5	A
Pulsed Source Current (Body Diode) *2	I _{SM}				-15	
Diode Forward Voltage	V _{SD}	T _J = 25°C, I _S = -1.25A, V _{GS} = 0V*1			-1.2	V

*1 Pulse width ≤ 300 μ s; duty cycle ≤ 2%.

*2 Repetitive rating; pulse width limited by max