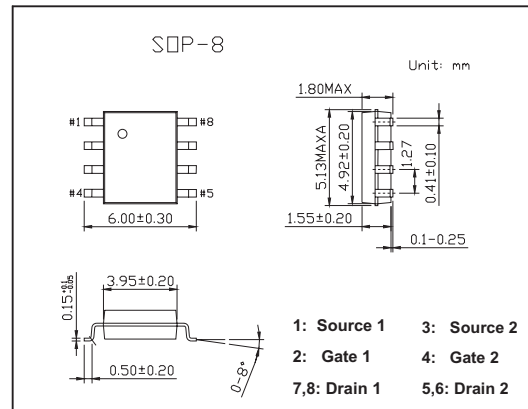
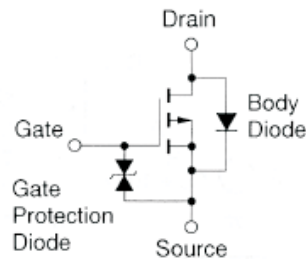


MOS Field Effect Transistor

KPA1750

■ Features

- Dual MOSFET chips in small package
- 4V Gate Drive Type and Low On-Resistance
 $R_{DS(on)1} = 0.09 \Omega$ TYP. ($V_{GS} = -10 V$, $I_D = -1.8 A$)
 $R_{DS(on)2} = 0.18 \Omega$ TYP. ($V_{GS} = -4 V$, $I_D = -1.8 A$)
- Low C_{iss} : $C_{iss} = 540 pF$ TYP.
- Built-in G-S protection diode
- Small and surface mount package



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

Parameter	Symbol	Rating	Unit
Drain to Source Voltage	V_{DSS}	-20	V
Gate to Source Voltage	V_{GSS}	±20	V
Drain Current (DC) $T_a = 25^\circ C$	$I_{D(DC)}$	±3.5	A
Drain Current (Pulse) *1	$I_{D(pulse)}$	±14	A
Total Power Dissipation $T_a = 25^\circ C$ *2	P_T	1.7	W
Total Power Dissipation $T_a = 25^\circ C$ *2		2.0	W
Channel Temperature	T_{ch}	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

*1 $PW \leq 10 \mu s$, Duty cycle $\leq 1\%$

*2 Mounted on ceramic substrate of $1200mm^2 \times 1.0 mm$

KPA1750

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain to Source On-state Resistance	R _{DS(on)1}	V _{DS} = -10V, I _D = -1.8 A		0.065	0.090	mΩ
	R _{DS(on)2}	V _{GS} = -4V, I _D = -1.8 A		0.125	0.180	mΩ
Gate Cut-off Voltage	V _{GS(off)}	V _{DS} = -10 V, I _D = -1 mA	-1.0	-1.7	-2.5	V
Forward Transfer Admittance	y _{fs}	V _{DS} = -10 V, I _D = -1.8A	2.0	4.4		S
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -20 V, V _{GS} = 0			-10	μA
Gate Leakage Current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0			± 10	μA
Input Capacitance	C _{iss}	V _{DS} = -10 V, V _{GS} = 0, f = 1 MHz		540		pF
Output Capacitance	C _{oss}			385		pF
Reverse Transfer Capacitance	C _{rss}			105		pF
Turn-on Delay Time	t _{d(on)}	I _D = -1.8 A, V _{GS(on)} = -10 V, V _{DD} = -10 V, R _G = 10 Ω		10		ns
Rise Time	t _r			110		ns
Turn-off Delay Time	t _{d(off)}			340		ns
Fall Time	t _f			230		ns
Total Gate Charge	Q _G	I _D = -3.5A, V _{DD} = -16V, V _{GS} = -10 V		18		nC
Gate to Source Charge	Q _{GS}			2.0		nC
Gate to Drain Charge	Q _{GD}			5.1		nC
Body Diode forward Voltage	V _{F(S-D)}	I _F = 3.5 A, V _{GS} = 0		0.8		V
Reverse Recovery Time	t _{rr}	I _F = 3.5 A, V _{GS} = 0 V		160		ns
Reverse Recovery Charge	Q _{rr}	di/dt = 100 A/μs		310		nC