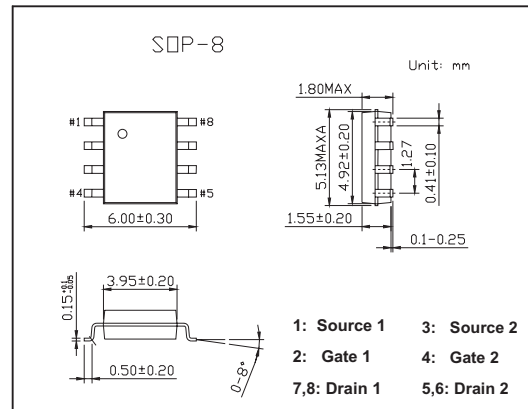
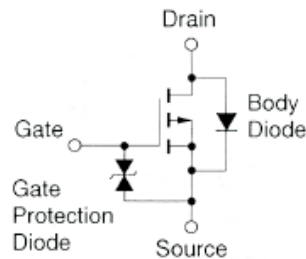


## MOS Field Effect Transistor

### 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	$V_{GSS}$	$\pm 20$	V
Drain Current (DC) $T_a = 25^\circ C$	$I_{D(DC)}$	$\pm 3.5$	A
Drain Current (Pulse) *1	$I_{D(pulse)}$	$\pm 14$	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	RDS(on)1	VDS = -10V, ID = -1.8 A		0.065	0.090	mΩ
	RDS(on)2	VGS = -4V, ID = -1.8 A		0.125	0.180	mΩ
Gate Cut-off Voltage	VGS(off)	VDS = -10 V, ID = -1 mA	-1.0	-1.7	-2.5	V
Forward Transfer Admittance	yfs	VDS = -10 V, ID = -1.8A	2.0	4.4		S
Zero Gate Voltage Drain Current	IDSS	VDS = -20 V, VGS = 0			-10	μA
Gate Leakage Current	IGSS	VGS = ±20V, VDS = 0			± 10	μA
Input Capacitance	Ciss	VDS = -10 V, VGS = 0, f = 1 MHz		540		pF
Output Capacitance	Coss			385		pF
Reverse Transfer Capacitance	Crss			105		pF
Turn-on Delay Time	td(on)	ID = -1.8 A, VGS(on) = -10 V, VDD = -10 V, RG = 10 Ω		10		ns
Rise Time	tr			110		ns
Turn-off Delay Time	td(off)			340		ns
Fall Time	tf			230		ns
Total Gate Charge	QG	ID = -3.5A, VDD = -16V, VGS = -10 V		18		nC
Gate to Source Charge	QGS			2.0		nC
Gate to Drain Charge	QGD			5.1		nC
Body Diode forward Voltage	VF(S-D)	IF = 3.5 A, VGS = 0		0.8		V
Reverse Recovery Time	trr	IF = 3.5 A, VGS = 0 V		160		ns
Reverse Recovery Charge	Qrr	di/dt = 100 A/μs		310		nC