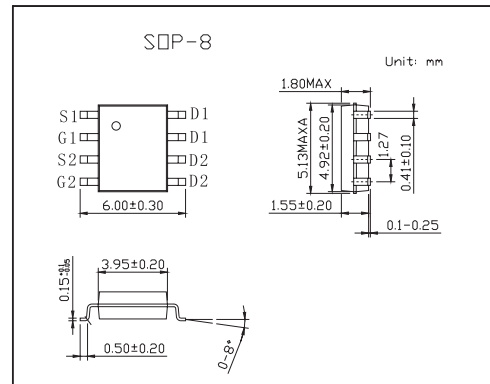
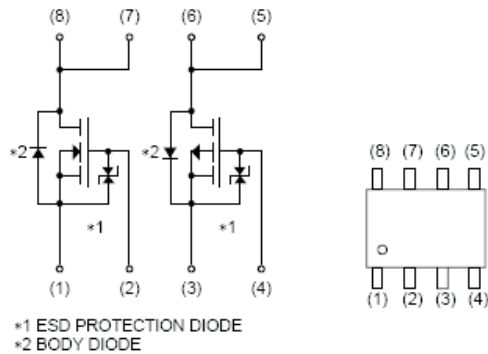


Switching

KP8M5

■ Features

- Low on-resistance.
- Built-in G-S Protection Diode.
- Small and Surface Mount Package.
- Power switching, DC / DC converter.



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	N-Channel	P-Channel	Unit
Drain-source voltage	V _{DSS}	30	-30	V
Gate-source voltage	V _{GSS}	±20	±20	V
Drain current Continuous	I _D	±6.0	±7.0	A
Drain current Pulsed *	I _{DP}	±24	±28	A
Source current (Body diode) Continuous	I _S	1.6	-1.6	A
Source current (Body diode) Pulsed *	I _{SP}	6.4	-28	A
Total power dissipation	P _D	2		W
Channel temperature	T _{ch}	150		°C
Storage temperature	T _{stg}	-55 to +150		°C
Channel to ambient	R _{th (ch-a)}	62.5		°C/W

* Pw ≤ 10 μs, Duty cycle ≤ 1%

KP8M5

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Gate-source leakage	I _{GSS}	V _{GS} =±20V, V _{DS} =0V			±10	μA
		V _{GS} =±20V, V _{DS} =0V			±10	
Drain-source breakdown voltage	V _{(BR) DSS}	I _D =1mA, V _{GS} =0V	30			V
		I _D =-1mA, V _{GS} =0V	-30			
Zero gate voltage drain current	I _{DSS}	V _{DS} =30V, V _{GS} =0V			1	μA
		V _{DS} =-30V, V _{GS} =0V			-1	
Gate threshold voltage	V _{GS (th)}	V _{DS} =10V, I _D =1mA	1.0		2.5	V
		V _{DS} =-10V, I _D =-1mA	-1.0		-2.5	
Static drain-source on-state resistance	R _{DS (on)}	I _D =6.0A, V _{GS} =10A		21	28	mΩ
		I _D =6.0A, V _{GS} =4.5V		30	41	
		I _D =6.0A, V _{GS} =4V		33	45	
Static drain-source on-state resistance	R _{DS (on)}	I _D =-7A, V _{GS} =-10A		20	28	mΩ
		I _D =-7A, V _{GS} =-4.5V		25	35	
		I _D =-7A, V _{GS} =-4.0V		30	42	
Forward transfer admittance	Y _{fs}	I _D =6.0A, V _{DS} =10V	4.0			S
		I _D =-7A, V _{DS} =-10V	6.0			
Input capacitance	C _{iss}	N-Channel V _{DS} =10V, V _{GS} =0V, f=1MHz	N-Ch		520	pF
			P-Ch		2600	
Output capacitance	C _{oss}	P-Channel	N-Ch		150	pF
			P-Ch		450	
Reverse transfer capacitance	C _{rss}	V _{DS} =-10V, V _{GS} =0V, f=1MHz	N-Ch		95	pF
			P-Ch		350	
Turn-on delay time	t _{d (on)}	I _D =3A, V _{DD} =15V	N-Ch		9	ns
		I _D =-3.5A, V _{DD} =-15V	P-Ch		20	
Rise time	t _r	N-Channel V _{GS} =10V, R _L =5.0Ω, R _G =10Ω	N-Ch		21	ns
			P-Ch		50	
Turn-off delay time	t _{d (off)}	P-Channel V _{GS} =-10V, R _L =4.3Ω, R _G =10Ω	N-Ch		36	ns
			P-Ch		110	
Fall time	t _f	P-Channel V _{GS} =-10V, R _L =4.3Ω, R _G =10Ω	N-Ch		13	ns
			P-Ch		70	
Total gate charge	Q _g	N-Channel V _{DD} =15V, V _{GS} =5V, I _D =6.0A	N-Ch		7.2	nC
			P-Ch		25	
Gate-source charge	Q _{gs}	P-Channel	N-Ch		1.8	nC
			P-Ch		5.5	
Gate-drain charge	Q _{gd}	V _{DD} =-15V, V _{GS} =-5V, I _D =-7.0A	N-Ch		2.8	nC
			P-Ch		10	
Forward voltage	V _{SD}	I _S =6.4A, V _{GS} =0V	N-Ch		1.2	V
		I _S =-1.6A, V _{GS} =0V	P-Ch		-1.2	