

## MOS Field Effect Transistor 2SK3305

### ■ Features

- Low gate charge  
Q<sub>G</sub> = 13 nC TYP. (V<sub>DD</sub> = 400V, V<sub>GS</sub> = 10 V, I<sub>D</sub> = 5.0A)
- Gate voltage rating ±30 V
- Low on-state resistance  
R<sub>DS(on)</sub> = 1.5 Ω MAX. (V<sub>GS</sub> = 10 V, I<sub>D</sub> = 2.5A)
- Avalanche capability ratings



### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Drain to source voltage	V <sub>DSS</sub>	500	V
Gate to source voltage	V <sub>GSS</sub>	±30	V
Drain current	I <sub>D</sub>	±5	A
	I <sub>DP</sub> *	±20	A
Power dissipation	P <sub>D</sub>	T <sub>C</sub> =25°C	75
		T <sub>A</sub> =25°C	1.5
Channel temperature	T <sub>ch</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

\* PW ≤ 10 μs, Duty Cycle ≤ 1%

### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Drain cut-off current	I <sub>DSS</sub>	V <sub>DS</sub> =500V, V <sub>GS</sub> =0			100	μA	
Gate leakage current	I <sub>GSS</sub>	V <sub>GS</sub> =±30V, V <sub>DS</sub> =0			±100	μA	
Gate cutoff voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =1mA	2.5		3.5	V	
Forward transfer admittance	Y <sub>fs</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =2.5A	1.0	3.0		S	
Drain to source on-state resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =2.5A		1.3	1.5	Ω	
Input capacitance	C <sub>iss</sub>	V <sub>DS</sub> =10V, V <sub>GS</sub> =0, f=1MHz		700		pF	
Output capacitance	C <sub>oss</sub>				115		pF
Reverse transfer capacitance	C <sub>rss</sub>				6		pF
Turn-on delay time	t <sub>on</sub>	I <sub>D</sub> =2.5A, V <sub>GS(on)</sub> =10V, R <sub>G</sub> =10Ω, V <sub>DD</sub> =150V, R <sub>L</sub> =60Ω		16		ns	
Rise time	t <sub>r</sub>				3		ns
Turn-off delay time	t <sub>off</sub>				33		ns
Fall time	t <sub>f</sub>				5.5		ns