

# 2SK2709

External dimensions 2 ..... FM100

## Absolute Maximum Ratings (Ta = 25°C)

Symbol	Ratings	Unit
V <sub>DSS</sub>	600	V
V <sub>GSS</sub>	±30	V
I <sub>D</sub>	±8.5	A
I <sub>D</sub> (pulse) *1	±34	A
P <sub>D</sub>	85 (Tc = 25°C)	W
E <sub>AS</sub> *2	300	mJ
I <sub>AS</sub>	8.5	A
T <sub>ch</sub>	150	°C
T <sub>stg</sub>	-55 to +150	°C

\*1: P<sub>w</sub> ≤ 100μs, duty cycle ≤ 1%

\*2: V<sub>DD</sub> = 30V, L = 8mH, I<sub>L</sub> = 8.5A, unclamped, R<sub>G</sub> = 50Ω, See Figure 1 on Page 5.

## Electrical Characteristics (Ta = 25°C)

Symbol	Ratings			Unit	Conditions
	min	typ	max		
V <sub>(BR) DSS</sub>	600			V	I <sub>D</sub> = 100μA, V <sub>GS</sub> = 0V
I <sub>GSS</sub>			±100	nA	V <sub>GS</sub> = ±30V
I <sub>DSS</sub>			100	μA	V <sub>DS</sub> = 600V, V <sub>GS</sub> = 0V
V <sub>TH</sub>	2.0	3.0	4.0	V	V <sub>DS</sub> = 10V, I <sub>D</sub> = 1mA
Re (yfs)	5.0	7.0		S	V <sub>DS</sub> = 20V, I <sub>D</sub> = 4A
R <sub>DS (on)</sub>		0.65	0.85	Ω	V <sub>GS</sub> = 10V, I <sub>D</sub> = 4A
C <sub>iss</sub>		1200		pF	V <sub>DS</sub> = 10V, f = 1.0MHz, V <sub>GS</sub> = 0V
C <sub>oss</sub>		270		pF	
C <sub>rss</sub>		150		pF	
t <sub>d (on)</sub>		30		ns	I <sub>D</sub> = 4A, V <sub>DD</sub> = 250V, R <sub>L</sub> = 62.5Ω, V <sub>GS</sub> = 10V, See Figure 2 on Page 5.
t <sub>r</sub>		40		ns	
t <sub>d (off)</sub>		110		ns	
t <sub>f</sub>		65		ns	
V <sub>SD</sub>		0.95	1.5	V	I <sub>SD</sub> = 8.5A, V <sub>GS</sub> = 0V

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