

# 2SK2704

External dimensions 1 ..... FM20

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

Symbol	Rated	Unit
V <sub>DSS</sub>	450	V
V <sub>GSS</sub>	±30	V
I <sub>D</sub>	±13	A
I <sub>D</sub> (pulse) *1	±52	A
P <sub>D</sub>	40 (Tc = 25°C)	W
E <sub>AS</sub> *2	400	mJ
I <sub>AS</sub>	13	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 = 4.5mH, I<sub>L</sub> = 13A, 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>	450			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> = 450V, 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
R <sub>e</sub> (yfs)	6.0	9.0		S	V <sub>DS</sub> = 20V, I <sub>D</sub> = 6.5A
R <sub>DS</sub> (on)		0.48	0.57	Ω	V <sub>GS</sub> = 10V, I <sub>D</sub> = 6.5A
C <sub>iss</sub>		1300		pF	V <sub>DS</sub> = 10V, f = 1.0MHz, V <sub>GS</sub> = 0V
C <sub>oss</sub>		280		pF	
C <sub>rss</sub>		130		pF	
t <sub>d</sub> (on)		30		ns	I <sub>D</sub> = 6.5A, V <sub>DD</sub> = 200V, R <sub>L</sub> = 30Ω, V <sub>GS</sub> = 10V, See Figure 2 on Page 5.
t <sub>r</sub>		40		ns	
t <sub>d</sub> (off)		95		ns	
t <sub>f</sub>		50		ns	
V <sub>SD</sub>		1.0	1.5	V	I <sub>SD</sub> = 13A, V <sub>GS</sub> = 0V

